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LONG-TERM STUDY OF EDUCATIONAL EFFECTIVENESS OF NEWLY FORMED CENTRALIZED SCHOOL DISTRICTS IN RURAL AREAS. PART TWO, CONTINUED.

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A STUDY OF THE EFFECTS OF SCHOOL REDISTRICTING ON THE EDUCATION OF MALES AND FEMALES AND ON THE COMMUNITIES INVOLVED IN SCHOOL REDISTRICTING WAS CONDUCTED IN WISCONSIN. BASIC OBJECTIVES OF THE STUDY INVOLVED COMPARATIVE ANALYSIS BETWEEN REDISTRICTED AND NON-REDISTRICTED SCHOOL SYSTEMS. COMPARISONS WERE MADE TO--(1) DETERMINE THE DIFFERENCE IN OPPORTUNITIES PROVIDED MALE AND FEMALE STUDENTS, (2) ANALYZE DIFFERENCES IN ACADEMIC ACHIEVEMENT AND INTELLIGENCE LEVEL OF STUDENTS, (3) DETERMINE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND EXPENDITURES FOR EDUCATION, AND (4) DETERMINE EFFECTS ON FARMERS' SOCIAL AND ECONOMIC CONTACTS. FIVE REDISTRICTED COMMUNITIES WERE MATCHED WITH FIVE TRADIONALLY-ORGANIZED SCHOOL DISTRICTS, AND STARTING WITH GRADE 1, STUDENTS WERE COMPARED FOR 12 YEARS. MATCHING CRITERIA INCLUDED DISTRICT ENROLLMENT, PHYSICAL FACILITIES, SIZE OF COMMUNITY TAX BASE, BUS TRANSPORTATION, AND COMMON INTERESTS. STUDENTS WERE TESTED IN GRADES 1,6,9, AND 12. IT WAS FOUND THAT--(1) OPPORTUNITIES PROVIDED FOR THE EDUCATIONAL DEVELOPMENT OF STUDENTS WERE GREATER IN REDISTRICTED SCHOOLS, (2) BOTH MALES AND FEMALES FROM REDISTRICTED SCHOOLS PERFORMED BETTER IN ACADEMIC ACHIEVEMENT, AND (3) ONLY MINOR VARIATIONS IN SOCIO-ECONOMIC CONTACTS EXISTED BETWEEN REDISTRICTED AND NON-REDISTRICTED SCHOOL COMMUNITIES. THE THIRD HYPOTHESIS IS NOT REPORTED DUE TO LACK OF DATA. RELATED REPORTS ARE ED 002 857 AND RC 001 933. (JS)

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LONG-TERM STUDY OF EDUCATIONAL EFFECTIVENESS OF NEWLY FORMED CENTRALIZED SCHOOL DISTRICTS IN RURAL AREAS - PART 2

COOPERATIVE RESEARCH PROJECT No. 1318

BURTON W. KREITLOW

UNIVERSITY OF WISCONSIN

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Long-Term Study of
EDUCATIONAL EFFECTIVENESS
# of Newly Formed
Centralized School Districts
in Rural Areas - Part Two

Burton W. Kreitlow

The University of Wisconsin
Madison, Wisconsin

1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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The research reported herein was supported by the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare.

Foreword

This study began in 1949 with the cooperation of county superintendents, administrators, teachers, parents, and students of the schools in the ten communities studied. Financial aid and graduate student assistance on the research came from several sources, including the Graduate School, Department of Educational Policy Studies, Department of Agricultural and Extension Education, Cooperative Extension Service, and the Numerical Analysis Laboratory of the University of Wisconsin. The World Book Company, the Personnel Press, the California Test Bureau, and the Educational Testing Service have made tests available at less than retail cost as a means of encouraging this project. The Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare has helped finance the program since 1958.

The data gathered in this project are so extensive that only the hypotheses of pressing immediate value have been tested in any subproject period. Some data in the initial study remain to be summarized and reported. Analysis of data in a replication begun in 1954-55 and to be completed through grade twelve in 1968 will be completed and compared with the initial findings. Extensive longitudinal data available permit investigation of special problems not planned for in the initial design.

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CHAPTER I: SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

School district reorganization in Wisconsin has progressed for more than a century, but the greatest changes occurred after 1947 legislation established county school committees. Reorganization legislation since 1947 has promoted greater learning opportunities for Wisconsin boys and girls. Legislation in other parts of the nation has followed a similar pattern. In the decade between 1955-56 and 1965-66 the number of school districts in the United States fell to half. Between 1949 and 1966, Wisconsin school districts were reduced from 6,000 to 700.

As the school district reorganization movement gained momentum, parents and educators asked, "Did school district reorganization really improve the education provided for boys and girls?" In answer, in 1949 University of Wisconsin research workers began an intensive study of the effects of school district reorganization on the education of boys and girls and on the communities involved in reorganization.

The four basic objectives of the study were:

1. To determine the opportunities provided youngsters attending reorganized and non-reorganized (traditionally-organized) school districts.
2. To determine the academic achievement and intelligence level of boys and girls attending reorganized and non-reorganized school districts and to analyze any noted differences.
3. To determine the relationship between academic achievement of the youngsters and the expenditure for education in reorganized and non-reorganized school districts.
4. To determine the effects of school district reorganization on the farmers' social and economic contacts with the village center.

The basic design of the study consisted of selecting five communities with newly reorganized school districts and matching them with five communities having traditionally-organized school districts and starting with all of the first-grade students in the sample reorganized and non-reorganized schools comparing them through 12 years of school and beyond. The first pair of communities was selected in 1949-50. Two pairs were selected in 1950-51, and the final two pairs were selected in 1951-52.

Newly reorganized districts were chosen to represent the various levels of reorganization established by educational authorities. Criteria used in selecting reorganized districts included such factors as district enrollment, physical facilities, size of community (community boundaries were made to coincide with trade area boundaries for the village center, and the high school attendance area; hence some reorganized communities also included non-reorganized districts), tax base, bus transportation, and a community with common interests. Then these communities were matched with non-reorganized communities on the basis of wealth, population (size and distribution), topography, type of farming, nearness to cities, and total area.

Two of the reorganized communities met the established criteria sufficiently well to be classified as "well-organized communities." Two were considerably smaller in enrollment, area, wealth, and potential educational program than demanded by the criteria. While the fifth reorganized community met some of the criteria, it did not meet others.

The first year that the communities were involved in the study, their first-grade pupils were tested and compared. This same group of students was also tested at grades 6, 9, and 12. The group will be studied further five years after graduation from high school. When this original group had reached sixth grade, a replication study was started with first graders. The same pattern of testing and comparing was followed for the replication group as was outlined for the original group.

Hypotheses in this report were tested on the basis of twelfth-grade data that were analyzed during the period covered by this project. Major hypotheses tested herein are as follows:

H_{o1} "There are no differences between reorganized and non-reorganized school communities in opportunities available to students and teachers."

H_{o2} "There are no differences between reorganized and non-reorganized school communities in academic achievement and personal and social adjustment of boys and girls."

H_{o4} "There are no differences between reorganized and non-reorganized school communities in the social and economic contacts of parents with the village center."

Another major hypothesis H_{o3} is not reported here because no additional data pertaining to it were analyzed at this stage of the investigation. Previously it had been concluded that school district reorganization led to greater expenditure of funds at the elementary level as well as to greater academic achievement.

Opportunities Available

To test H_{o1}, data were organized and analyzed or described to provide judgment on six sub-hypotheses. These sub-hypotheses dealt with differences between reorganized and non-reorganized communities in these areas of opportunity:

H_{1a}--teaching aids and materials

H_{1b}--library resources

H_{1c}--staff qualifications and assignment

H_{1d}--building capacity and class size

H_{1e}--provisions for staff

H_{1f}--curriculum offerings

Analysis of the data collected on the availability of teaching aids and materials (H_{1a}) at the high school level revealed that reorganized districts were significantly better equipped with micro projectors and overhead projectors. There were no significant differences between the reorganized and non-reorganized districts on the availability of radio and television in the classroom or in expenditure per pupil for audio-visual equipment.

An examination of the extent of library resources in the reorganized and non-reorganized communities (H_{1b}) revealed that there were significant differences showing that the reorganized communities had a greater expenditure for library materials than did the non-reorganized communities. No important differences were noted in terms of 1) number of volumes in the library, 2) number of volumes added, 3) number of obsolete volumes discarded, and 4) the number of class periods assigned to library work.

Descriptive data on staff qualifications and assignments (H_{1c}) were analyzed and no marked differences between reorganized and non-reorganized schools at the high school level were identified except in the significantly higher participation of teachers in reorganized districts in summer session and correspondence study.

Findings related to building capacity and class size (H_{1d}) were not consistent and none of the differences noted were of sufficient size to reach the level of significance. Factors with minor advantages to reorganized districts were in pupil/teacher ratio, and duties assigned to high school principals.

Minor advantages to non-reorganized districts were in fewer classes of over 35 pupils, and assignment of responsibilities for health and guidance activities. Both reorganized and non-reorganized communities had average pupil enrollments at the high school level that were less than sufficient for curriculum flexibility, and both types of districts were operating near to maximum building capacity.

Of the professional opportunities for continued learning for the staff (H_{1e}), the reorganized districts provided significantly more days for in-service study and had a significantly larger professional library available for the use of the teaching staff.

A comparison of high school curricular offerings (H_{1f}) in the two types of school districts showed marked differences favoring reorganized districts in foreign language and art and favoring non-reorganized districts in the physical education program. Other curricular offerings were identical or showed only minor variations.

In terms of Hypothesis H_{o1}, six sub-hypotheses were tested and compared by statistical and descriptive methods. Twenty-three factors, other than curriculum, and 15 curriculum factors were analyzed. Six of the factors which favored the reorganized school communities and one factor which favored the non-reorganized were significant at the $P \geq .05$ level. On the basis of these findings, Hypothesis H_{o1} was rejected in part.

Achievement

Data related to hypotheses H_{o2} were subject to statistical analysis involving mean scores on academic achievement and personal and social behavior mean scores.

At grade twelve, those boys and girls who were in the non-reorganized part of the initially selected reorganized district were compared with those in the reorganized part on both H_{o2x} academic achievement and H_{o2y} personal and social behavior. The hypotheses failed to be rejected so the data were pooled and classified as reorganized in testing the major hypothesis H_{o2}.

Data used in the analysis were only for those boys and girls who had been in one of the 10 study communities (5 reorganized--5 non-reorganized) from grade one through grade twelve and for whom the necessary achievement and background data were available.

Hypothesis H_{2a} tested the difference in academic achievement between boys and girls in the reorganized and non-reorganized study communities. The analysis led to a rejection of the null hypothesis, with girls having the higher mean score. The differences were significant at the $P \geq .05$ level on 10 of 15 measures. Boys had a mean score higher than girls (not significant) only on the Physical Science test.

Tests of significance on hypothesis H_{2b} showed a continuation of the pattern established after grade one. Boys and girls in reorganized school communities scored higher on standardized achievement test than did those in non-reorganized school communities. Boys in the twelfth grade of reorganized districts scored higher than those in non-reorganized districts on 11 of 15 achievement measures. The differences were significant at the $P \geq .05$ level in Reading Vocabulary and Biological Science as well as in Mental Age. Girl's differences, significant on the same factors, favored those in reorganized districts on 13 of the 15 measures.

Differences between boys and girls in Personal and Social Behavior scores followed the general pattern established earlier in the investigation. Sub-hypothesis H_{2c} was rejected with a significantly higher mean score $P \geq .05$ favoring the girls over the boys on five of six measures. There were no differences of Feeling of Belonging and on Socio-economic Status and Parent Choice of the Level of the Child's Future Education.

For sub-hypothesis H_{2d}, the parts related to Socio-economic Status and level of education parents desired for their children failed to be rejected. On the parts of the sub-hypothesis related to Social and Personal Behavior, the differences between boys in reorganized and non-reorganized which were noted as significant at grade six, Sense of Personal Worth, and Total Personal-Social scores were again of sufficient magnitude to cause this part of the hypothesis to be rejected. The higher mean score favored boys in the non-reorganized communities.

On the basis of these findings hypothesis H_{o2}, "there are no differences between reorganized and non-reorganized school communities in boys' and girls' academic achievement and personal and social behavior" was rejected in part. H_{o2} was rejected with higher mean scores favoring reorganized communities as follows:

1. In Mental Ages for both boys and girls
2. In Reading Vocabulary for both boys and girls
3. In Biological Science scores for both boys and girls

H_{o2} was rejected with higher mean scores favoring boys in non-reorganized communities as follows:

1. In Sense of Personal Worth scores
2. In Total Personal Social Behavior scores

The factors on which differences were noted on the basis of ANOVA were subjected to Analysis of Co-variance controlling selected factors related to such achievement. As a result of this analysis, H_{o2} was rejected for the sub-hypothesis dealing with differences between reorganized and non-reorganized school communities on the Total Personal Social Behavior test with sixth-grade Socio-economic Status controlled. Boys in non-reorganized school communities had the higher mean score.

When Mental Age was controlled by use of Analysis of Co-variance, no significant differences remained between reorganized and non-reorganized communities on academic achievement factors. The sample of students in the reorganized and non-reorganized communities began their education with less than one month difference in mean mental age in months. During the course of 12 years of education in reorganized and non-reorganized school communities, greater measured mental development occurred in the reorganized communities. Where no significant difference was found in the early years of the investigation, by the time the same youngsters reached grade twelve, the difference was significant and H_{02} was rejected on the factor of mental development.

Socio-Economic Contacts

Data gathered from parents of the sample at first and twelfth grades were analyzed to test hypothesis H_{04} dealing with social and economic contacts of parents with the village center.

Hypothesis H_{4a} tested whether or not there were differences between total contacts with the village center between parents living in reorganized and non-reorganized school communities when the sample youngsters were in first grade (1950-1952) and in twelfth grade (1961-1963). The changes in contact noted during this period were small for both reorganized (up 4 percent) and non-reorganized (down 2 percent). The percentage using the village center for services at the twelfth-grade level were 44 percent in reorganized and 43 percent in non-reorganized. Null hypothesis H_{4a} failed to be rejected.

Sub-hypothesis H_{4b} was analyzed by examining for significant differences on each of 11 services independently. Only minor differences existed. At twelfth grade, parents of students in reorganized districts had more contacts on seven and parents of students in non-reorganized districts had more contacts on four of the selected services. On the basis of a Chi-square test of significance, the hypothesis H_{4b} failed to be rejected.

Sub-hypothesis H_{4c} analyzed differences between those living in the farm service area of reorganized and non-reorganized school communities as to their socio-economic contacts with the village center and changes in these contacts between the time sample students moved from grade one to grade twelve. For this portion of the total sample, there was a small increase (19 to 26 percent) in contacts in reorganized communities and a very slight decrease (38 to 36 percent) in non-reorganized communities. On the basis of a Chi-square test, H_{4c} was rejected.

Sub-hypothesis H_{4d} dealt with the nature and extent of change of contacts with the village center in each community in each pair of reorganized and non-reorganized communities. The small increases (two to seven percent) in four of the reorganized communities and the small decreases (one to seven percent) in non-reorganized communities were not sufficient to show statistical significance. Therefore, sub-hypothesis H_{4d} failed to be rejected.

One statistically significant difference between reorganized and non-reorganized districts was found in the sub-hypothesis H_{4c} of the major Hypothesis H_{04}. H_{04} failed to be rejected for sub-hypotheses H_{4a}, H_{4b} and H_{4d}. Some consistencies of increasing contact with village centers in reorganized districts and decreasing contact in non-reorganized districts accounts for the one significant sub-hypothesis. The rejection of H_{4c} makes essential the reexamination of H_{04} in the replication, even though three of the four sub-hypotheses failed to be rejected.

Conclusions

The conclusions which follow were made with special reference to the high school level of education in reorganized and non-reorganized school communities. Where possible, general references were made to the two types of school organization being analyzed in terms of the total program from grades one through twelve.

Most of the analyses are subject to replication in five years. Thus, tentative conclusions can be reexamined.

Opportunities

Opportunities provided for the educational development of students were significantly greater in reorganized than in non-reorganized school communities. The differences were not as extensive as those noted at the elementary level. This can be explained in part because in the elementary grades, the non-reorganized pattern of attendance was in a variety of separate school districts and different attendance centers. At the high school level, non-reorganized communities as well as the reorganized tended to establish a single attendance center--the high school.

In matched pairs of communities, as was the case in this investigation, the continuation of part of the large number of opportunity differences at the elementary level into the high school level was a most important finding and leads to the conclusion that the organization of the school districts over all or part of 12 years of education was indeed associated with learning opportunities provided for boys and girsl.

The boys and girls in reorganized communities had greater learning opportunities than did those in non-reorganized communities.

Achievement

In academic achievement the boys and girls in reorganized districts out performed those in non-reorganized districts. The evidence throughout 12 years of education indicated that the contact with greater opportunities did make a significant contribution to mental development. Although the mean grade twelve academic achievement test differences in Biological Science and Reading Vocabulary were significantly different, they were reduced when mental age was controlled by statistical tools. The factor responsible for this initial difference was mental age. At first grade, there were no differences in mental age and 12 years later the differences were significant and favored those boys and girls in reorganized districts.

On the basis of the findings, it is concluded that the type of school district structure was responsible for the significant increase in mental maturity.

The major achievement differences that were developed between grade one and grade six were maintained between grade six and grade nine, and they showed only minor regression during the high school years into grade twelve. This consistency, in a study using control groups, is sufficient to conclude that administrative organization of a community's school into a single kindergarten or first to twelfth-grade system is superior to the forms of multi-district organization once so typical of the Midwest.

In personal and social behavior, the boys in non-reorganized communities continued to show a significantly higher mean score on Total Personal Social Behavior than did those in reorganized communities. This difference occurred when the first analysis was made on grade six scores, appeared again at grade nine, and still existed at grade twelve. The point of greatest score differences favoring boys in non-reorganized districts was at grade nine when significant differences at the $P \geq .05$ percent level were present on five separate parts as well as on the Total Personal Social Behavior test score.

No data comparable to that gathered on the test of Personal and Social Behavior was available at grade one. The differences noted in grades 6, 9, and 12 may have existed at grade one, but this cannot now be determined. The fact that these data are missing does not preclude the tentative conclusion that boys in non-reorganized school communities became better adjusted personally and socially than boys in reorganized communities. Based on the same kinds of data, a tentative conclusion can be made that the measured personal and social behavior patterns of girls were not influenced differentially in reorganized and non-reorganized districts.

Socio-Economic Contacts

The pattern of minor variations between reorganized and non-reorganized school communities on socio-economic contacts of farmers with the village center continued. There was less justification at twelfth grade than at grade six to conclude that the nature of the communities' school district organization has little if any effect on patterns of social or economic interchange with the village center. The evidence points less clearly in that direction than it did at grade six. It was considered likely that more engulfing and broader factors than district organization led to adjustments in both reorganized and non-reorganized school communities.

Implications

A longitudinal investigation covering a span of time from grade one through grade twelve with the same sample communities and with data analyzed on the same boys and girls brings to the surface findings and concepts about school district reorganization that have implications for organization of districts in the future.

The remarkable increase in mental maturity of boys and girls in reorganized districts when compared to those in non-reorganized communities is sufficient to make very clear the need to "get on with the job of getting school districts in order." This investigation has not identified a maximum size in pupil population where this increase in mental age would level off, but the data in this study implied that schools with a student population of 1500 boys and girls from first through twelfth grade had not reached the optimum size to take full advantage of the economy of scale as it related to factors of opportunity and achievement.

The findings are sufficiently consistent to identify differential effects of district organization on personal and social behavior of boys and no such differential effects on girls. This factor has implications for further study of personal and social behavior phenomena. These phenomena are often ignored because the instruments of measurement are crude. Social and personal behavior need to be examined in greater detail. Can simple steps be taken in reorganized districts to overcome possible handicaps? Do the findings of Barker and Gump[1] related to greater participation in extra-curricular activities in small schools suggest that special efforts toward more participation in the reorganized districts can overcome handicaps?

School districts in the United States have changed markedly in the last two decades. Year by year districts in the last strongholds of small schools in the Midwest are disappearing. Reorganization can and does provide more opportunities. It can and does influence positively the mental development of both boys and girls. But reorganization also appears to have a less than desirable influence on the personal and social behavior of boys. The first two outcomes can be readily supported by theory--more opportunities and greater mental development in reorganized districts was expected. The undesirable outcome was not. What factors are responsible for it? Much remains to be discovered about the effects of school district organization on students and on the community.

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[1] Roger G. Barker and Paul V. Gump, Big School-Small School, Stanford University Press, Stanford, California, 1964.

CHAPTER II: PURPOSES

The basic purposes of this study were (1) to ascertain whether or not school district reorganization was worthwhile in terms of time, effort, and expenditure of funds, and (2) to determine the effects of such school district reorganization on the educational outcomes of the school.

Reorganization of school districts was one of several controversial educational issues which has faced professional educators, lay leaders, school boards, taxpayers, and society in general. It was an issue that has been apparent in varying degrees to educational leaders for the past century. In a summary of annual school reports, Patzer reported that the state superintendents began to express dissatisfaction with the schools and the school district system shortly after Wisconsin became a state.[2]

Superintendent Azel P. Ladd, in the annual school report of 1854, recognized that town superintendents failed to supply the needed leadership to carry out the advice of the state superintendent regarding consolidation of smaller school districts into bigger and wealthier districts.[3] A law was passed in 1861 by the Wisconsin Legislature which replaced the town superintendents with elected county superintendents. This legislation was followed by school district reorganization bills either passed, repealed, or amended in almost every session of the legislature thereafter. The legislation which followed 1861 gave power to the State Superintendent of Schools, revoked the power, established a system of town (township) school districts, tried to establish county school districts, and in 1965 removed the office of county superintendent and established Cooperative Service Agencies.

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[2] Conrad E. Patzer, Public Education in Wisconsin, issued by John Callahan, State Department of Public Instruction, Madison, Wisconsin, 1924, p. 9.

[3] Azel P. Ladd, State of Wisconsin, Annual School Report, Superintendent of Public Instruction, Madison, Wisconsin, 1854.

In 1947 a law established a county school committee and placed the state superintendent in a strictly advisory capacity. This law included provision for increased transportation aids for both elementary and high school districts. These aids were limited to districts which had suspended their schools, with the exception of those who could not find qualified teachers or whose buildings had been destroyed. The amount of high school tuition permissible was increased and the limitation of the mill rate was changed from the local assessed valuation to the equalized valuation.

The Reorganization Law of 1949 was passed to further assure the local autonomy of rural people and to make the county school committees more palatable to the general rural public in Wisconsin.[4] In the thirty-third annual report of the Wisconsin Department of Public Instruction, the state superintendent noted that by 1948 some 42 newly reorganized districts had been listed and that a total of 242 one-room schools closed between 1946 and 1948.

Summarizing a report of newly reorganized school districts in 1950 in Wisconsin, Kreitlow noted that "We have no newly reorganized areas in this state that meet all of the standards of good organization. There are only four districts approaching the attainment of these standards."[6]

A long term study of educational effectiveness of newly formed centralized school districts in rural areas was begun at the University of Wisconsin in 1949. This study was stimulated by the continuing problem of reorganizing Wisconsin school districts. The investigation reported here was a part of the long-term study and sought to determine whether or not the type of school district organization in rural communities was related to the outcomes of the school. This investigation was designed to test the effects of school district reorganization on (1) educational opportunities, (2) educational results, (3) educational cost, and (4) community and neighborhood social structures and processes.

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[4] Roland Arthur Koyen, An Analytical Study of Two Types of School Districts, Doctor's Thesis, University of Wisconsin, Madison, Wisconsin, 1951, p. 58.

[5] State of Wisconsin 33rd Report, Department of Public Instruction, State Superintendent of Public Instruction, Madison, 1948, p. 38.

[6] Burton W. Kreitlow, "Wisconsin's Newly Reorganized School Districts," University of Wisconsin, Madison, Unpublished Manuscript, 1950, p. 2.

This study examined two types of district organization in rural communities:

1. the community with the "reorganized" school district,
2. the community with a number of school districts under several boards of education

The unique characteristic of the study was that the sample included all first grade youngsters in the communities concerned and followed them as they proceeded through school. Findings in previous phases of the long-term study showed few achievement differences at first grade, major differences favoring reorganized districts by grade six, and continuing differences showing an advantage to reorganized districts in grade nine. Differences in opportunity were found, and they favored reorganized districts at grades one, six, and nine. The report presented in this document related to the effect of reorganization at the grade twelve level. In addition to the specific relationship to grade twelve, this report summarized the data of the study from first grade through twelve as a means of identifying the variations in the pattern at the specific grade levels at which youngsters in the longitudinal study were examined. There are some variations among the data at first, sixth, and ninth grade levels in this report and that shown in previous reports. This occurs because some of the students moved out of the communities as the study progressed. The comparative data used includes all students in the original first grade sample who had been part of the longitudinal study from grade one through grade twelve. This does not invalidate the previous reports which compared all youngsters who continued from first grade through sixth grade in reorganized and non-reorganized communities. Those who migrated from the community before reaching grade twelve are not in the sample analyzed in this report, and thus the investigation has a bias related to migration.

This bias does not interfere with the major purpose of the study. It is essential to the purpose to make the comparisons only among those whose entire educational tenure has been in the same community.

CHAPTER III: REVIEW OF RELATED LITERATURE

The literature relating to school reorganization was reviewed in two parts: the first, History, provides a limited summary of school reorganization in Wisconsin; the second, Research, provides a review of recently published research on school reorganization throughout the United States. A comprehensive review of the literature was not made in this part of the study because it was treated extensively in the first report published in 1962.[7]

History

Prior to 1884 Wisconsin school legislation gave the school district almost complete independence in its organization, maintenance, and control. Public education was primarily a state function with certain powers delegated to the county, town (township), and school district. The writers of Wisconsin's constitution recognized the importance of public education supported by public taxation to the general welfare and progress of the state.[8] Throughout the latter half of the 1800's several moves were made to secure larger units than the district for school administration. These efforts were, for the most part, ineffective.

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[7] B. W. Kreitlow, "Long Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas," Cooperative Research Project 375, University of Wisconsin, Madison, Wisconsin, 1962. (Available from Research and Development Center on Learning and Re-education, University of Wisconsin, Madison, Wisconsin)

[8] Koyen, Op. cit., p. 15.

Between the years of 1897 and 1913, Superintendent C. P. Cory[9] and other leading Wisconsin educators were chiefly responsible for the Consolidation Act of 1913. Under this act, 15 percent of the voters in two or more contiguous districts could petition for consolidation. This act provided also for the creation of a county board of education, consisting of five members, from each county. This board was to have full authority to organize, alter, or consolidate school districts. It was given the powers previously held by the town boards, village boards, and school councils. This act was short-lived, being repealed in 1915.

In the period from 1915 through the twenties and thirties, repeated efforts were made by educators to bring about legislation that would encourage school district consolidation. Such efforts usually met with defeat. In 1939, just 100 years after the first general law affecting school district organization, the legislature gave the state superintendent some discretionary power to reorganize. This law heralded a definite and continued program of school district reorganization that showed results.

The 1947 legislature provided for a two year study of the whole educational system in Wisconsin. Chapter 573[10] authorized a legislative commission to employ such professional, research, and clerical assistants as it deemed necessary, to hold meetings when and where deemed advisable, and to subpeona witnesses and compel production of books, records, or documents which it felt were needed in its investigations.

Among other changes included in the 1947 legislation were immediate measures to provide equal educational opportunities financed by equalized taxation; a reduction of the state superintendent's powers to that of advising and consulting with county school committees; increased transportation aids for both elementary and high school districts. Such temporary changes were to be viewed again in the light of the report of the Commission on Improvement of the Educational System.

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[9] State of Wisconsin, Biennial Report of the State Superintendent of the State of Wisconsin, Madison, Wisconsin, 1904, pp. 3-16.

[10] Wisconsin Session Laws, Chapter 573, 1947.

The Commission made an exhaustive study and reported its findings and recommendation as prescribed by law.

In the general objectives,[11] emphasis was given to (1) equalization of educational opportunity, (2) equalization of educational costs, and (3) constant evaluation of the efficiency of the program, as well as continuous improvement in amount and quality of education provided. As a means of improving the possibility of attaining these objectives through the reorganization of school districts, the following recommendations were pertinent:

1. All authority now resting with the State Superintendent of Public Instruction to reorganize or consolidate school districts should be repealed.
2. All authority of the town boards to reorganize or consolidate school districts should be repealed.
3. The county school committees should be required to file a master plan with the State Department of Public Instruction by January, 1951. This plan should provide for a comprehensive program of education with administrative units covering grades from kindergarten or first grade through the twelfth grade, which can be a pattern for future development.
4. The county committee should have authority to approve transportation plans.
5. The county committee should be the policy making body for educational purposes for the county, with authority to select the County Superintendent of Schools.

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[11] Report of the Commission, Part One, 1949, p. 6.

6. All parts of the state should be within an operating administrative district for both elementary and secondary education.

7. Aids should be withheld from non-conforming districts or areas.

Many other recommendations were made, and the above were elaborated and refined. All were not incorporated in the laws of 1949.[12]

In the 1949-50 school year, Burton W. Kreitlow used the "desirable characteristics of a good school district" and "suggested standards for district reorganization" listed in the "Guide for County School Committees"[13] as a basis on which to begin measuring progress in district reorganization in Wisconsin. In his report, Kreitlow used 10 characteristics as criteria,[14] and observed in 1949 that no newly reorganized areas had met all of the standards, and only four might be regarded as approaching the attainment of the standards.[15]

During the course of this long-term study of school district reorganization (1949 to 1966), the number of school districts in Wisconsin was reduced from approximately 6000 to 700. The school district reorganization process was well underway.

Research

The decline in the number of school districts in the United States has continued. In a report by the Research Division of the National Education

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[12] Kreitlow, Op. cit., p. 6.

[13] A Guide for County School Committees, State Superintendent of Schools, State Department of Public Instruction, Madison, Wisconsin, 1949, p. 22.

[14] Burton W. Kreitlow, "Wisconsin's Newly Reorganized School Districts," University of Wisconsin, Madison, Wisconsin, Unpublished Manuscript, 1950, p. 1.

[15] Kreitlow, Op. cit., p. 6.

Association, it is noted that from the 1955-56 school year to the 1965-66 school year there was over a 50 percent reduction in the number of school districts in the United States.[16]

One major study and a number of studies similar to those reported by Kreitlow in 1962 have been published in the last three years. The most comprehensive of these reports is that by Barker and Gump.[17] This report dealt in depth with the relationship of high school size to student behavior. Student behavior is one of the factors of concern in the longitudinal study and one which, in the earlier report,[18] noted that there were differences between boys from the reorganized and non-reorganized school districts on sense of personal worth, community relations and total personal-social score and that, on the sense of personal worth, those boys in the non-reorganized districts maintained their higher mean score after socio-economic status and teacher ratings were controlled by analysis of co-variance. The Barker-Gump report, dealing with a related phenomenon and studying it in greater depth, showed a similar finding. Their investigation dealt with out-of-class experiences and was focused on (a) the nature of the forces that led to participation in extra-curricular behavior settings; (b) the extent and level of participation in these settings; (c) the satisfactions gained from these participations.

On the basis of their investigation, Barker and Gump[19] implied that some of the current assumptions of consolidated school superiority were exaggerated. Their findings showed that, as a result of consolidation, there is an increase in the number of school settings penetrated at the entry level; but there are, at the same time, decreases on a number of factors:

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[16] National Education Association Research Bulletin, "Estimates of School Statistics, 1965-66," Vol. 44, Number 1, February, 1966, p. 23.

[17] Roger G. Barker and Paul V. Gump, Big School-Small School, Stanford University Press, Stanford, California, 1964.

[18] Kreitlow, Op. cit., pp. 47-48.

[19] Barker and Gump, Op. cit., p. 153.

(1) external pressures aimed at increasing their participation in extra curricular activities,

(2) sense of personal responsibility associated with extra curricular activities,

(3) number of school settings penetrated to the performance level,

(4) range of super-variety settings penetrated,

(5) number of school settings judged to be most worthwhile, and

(6) number of satisfactions associated with physical well-begin, acquiring knowledge and developing intellectual interests, developing a self-concept and zest for living.

The suggestion of the researchers was that some of the advantages of the small school could well be attempted in the larger school setting through its structural organization and instructional procedures and extra curricular activities. It is through these attachments that a sense of contribution can be made to group goals rather than placing so much emphasis on top performance so that only the most talented students will participate.

Other studies tended to follow the same pattern of those previously reported. For example, Street, Powell, and Hamblen re-examined student performance on standardized test and school size in terms of enrollment and found that the largest of the districts studied showed higher student performance than the two smaller groups; but the two smaller groups of elementary students, one school under a hundred students and one school of between one hundred and three hundred, showed no significant differences.[20]

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[20] Paul Street, James H. Powell, and John Hamblen, "Achievement of Students and Size of School," Journal of Educational Research, 55:261-66, March, 1962.

Finley and Thompson compared achievement in multi-graded and single-graded schools for rural elementary school children, and found no differences of consequence on the California Achievement Battery Form W tests at the third and fifth grade level.[21]

The rural school drop-out problem continues to be looked at, and Youmans noted the disadvantage to the rural high school drop-out in Kentucky and also concluded that "rural school systems of Eastern Kentucky appear able to prepare young men for adult roles in rural areas, but is not so well equipped to prepare rural youth for employment in urban areas."[22]

Taylor, in an Indiana study, verifies findings on in-service education reported earlier by Kreitlow. Taylor reported that the larger schools used a significantly greater number of practices than the smaller schools in in-service training. On other factors, he found no real differences.[23]

Before and after studies, found in large numbers in earlier reviews of the literature, continued to be reported. Baugh, in his study of districts in Vigo County, Indiana, came up with the standard conclusion.[24] School district reorganization increased educational opportunities and provided a more equitable educational program to secondary school students. In this before and after study in the same community, there were real differences in the educational program; but there were no controls to indicate whether or not these differences would have occurred had there been no reorganization.

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[21] Carman J. Finley and Jack M. Thompson, "A Comparison of the Achievement of Multi-graded and Single-graded Rural Elementary School Children," Journal of Educational Research, 56:471-75, May-June, 1963.

[22] E. Grant Youmans, The Rural School Dropout, University of Kentucky, College of Education, No. 1, 36:1-31, September, 1963.

[23] Bob L. Taylor, "Are Small High Schools Doing An Adequate Job of In-Service Education?" High School Journal, 47:297-300, April, 1964.

[24] Max Baugh, "Educational Opportunities in the Secondary School of Vigo County, Indiana, Before and After School District Reorganization," Teachers College Journal, 35:51-52, November, 1963.

The financial concerns of rural communities led to continued research as shown by the report in Port Huron, Michigan. Reorganization resulted in less expenditure for administrative purposes allowing more tax dollars directly available for instruction.[25] Folkman reported that the rural areas were the critical ones in the terms of the need for better schools.[26] The author cited low salaries paid to teachers, small staff, and limited expenditure as the factors that distinguish these particular rural areas from the nation's schools in general. Miner examined some determinants of expenditures for elementary and secondary education and, in relation to reorganization, said, "Consolidation of local school districts long has been proposed as a cost reducing measure. However, the continued failure to find substantiation for the presence of economies of scale in education makes it doubtful that future expenditures will be reduced by consolidation. Enlargement of the size of school systems may reduce costs, but at the same time, be accompanied by an expansion and improvement of educational services. The failure to find a negative association between enrollment and expenditures per pupil is not an argument against consolidation; it is, however, an indication that future trends in consolidation are unlikely to lead to a reduction in current outlays per pupil."[27]

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[25] "Study Reveals Actual Savings through Merger." Michigan Education Journal, 40:316, December, 1962.

[26] William S. Folkman, "Rural Problem Areas Need Better Schools." Agricultural Economics Research, (USDA, Washington, D. C., Government Printing Office) 13:122-130, October, 1961.

[27] Jerry Miner, Social and Economic Factors in Spending for Public Education, New York, Syracuse University Press, 1963, p. 150.

CHAPTER IV: DESIGN AND METHODOLOGY

Design

Sample

The basic design for this research project is pictured in Figure 1, and entails a comparison between communities with the traditional school district organization and districts which have been reorganized. Between 1949 and 1951, five pairs of communities were selected, and all first grade children in these communities during the first year of the study made up the sample group. Sample groups are represented in Figure 1 by A, B, and C. The youngsters in the sample, their school, their teachers, and parents were studied comprehensively when the youngsters were in grades 1, 6, 9, and 12. They will be studied further five years after they graduate from high school.

A replication was started five years after the initial study began. The replication involved the same communities investigated in the initial study and are shown in Figure 1 by A', B', and C'. The replication measured the effectiveness of school district reorganization for the second sample group; the first sample group started school during the first year of a community's reorganization, and a second started five years after the initial reorganization was accomplished. This design will facilitate intra-community comparisons.

Ten Wisconsin communities, five with a reorganized school district structure and five with a traditional school district structure, were selected for the sample. Each reorganized community was matched with a non-reorganized (control) community, and the first grade students in both types of school communities were studied the year that their community was selected for the study. In the original group, the study started with 700 first grade children and the replication group started with 893 first graders.

In selecting school communities for the sample, a community with a reorganized district was selected first and then was paired with a non-reorganized community. The sample was selected from districts that had reorganized during the preceding year.

The selection in 1949 was based on the following criteria outlined by Kreitlow.[28]

1. A district should have at least 800-1000 pupils between the ages 6-18.
2. Each elementary school should bring together enough pupils so that children may attend a class of their own age group.
3. There should be approximately 300 students in each high school.
4. No child in grades 1-6 should ride more than 40 minutes one way on the bus.
5. No high school student should ride a bus over 60 minutes one way.
6. There should be a staff of at least 12 teachers in each high school.
7. School buildings should be large enough to provide adequate accomodations for the educational offerings. Future building needs should not be overlooked.
8. The school district should comprise an area in which the people have common ideals, centers of interests, similar modes of living, and in which they depend upon one another for their general welfare.
9. A satisfactory district should have sufficient valuation to support a modern educational program and have a single board of education elected by all the people living in

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[28] Kreitlow, Op. cit., p. 6.

the area served by the school. (In relation to 800-1000 pupils between the ages of 6-18, a sufficient valuation would be no less than $8,000,000.)

10. The overall program should provide educational opportunities for post high school students and adults.

In 1949, the year that the project began, one reorganized community was selected from among 37 newly reorganized districts. Only four of the 37 districts approached the standards of good organization noted in the criteria. In order to represent the total pattern of reorganization in Wisconsin, later selections had to include districts that didn't meet the criteria. Thus, of the five chosen, two of the reorganized communities selected met only a few of the criteria for effective reorganization, one met about half of these criteria, and two were selected because they most nearly represented the "ideal" reorganization as was spelled out by the criteria.

After a reorganized community (or communities) had been selected, it was paired with a community having a traditional multi-district administrative organization. The non-reorganized communities were matched with the reorganized communities on the basis of wealth, population size and distribution, topography, type of farming, nearness to cities and industries, type and distribution of roads and highways, distribution between farm and village residence, and area and enrollment of the districts. The sample included the wooded area of northern Wisconsin, the rich agricultural area of the central and southwestern part of the state, and the developing commuting area in the heavily populated and industrialized lake shore in Milwaukee, Racine, and Kenosha counties. Comparison of the selected districts with other rural districts on the basis of demographic data showed that these communities possessed features typical of rural school districts, not only in Wisconsin, but throughout the Midwest.

Figure 2 shows the location of each of the communities in Wisconsin. Table 1 indicates the comparability of the selected reorganized and non-reorganized communities on certain factors used in matching the communities. The total equalized evaluation for tax purposes for each child in the reorganized and non-reorganized communities was very similar the year the study began - $12,087 and $11,795, respectively. It should be recognized that changes in valuation since 1949 have been great, but the general equality among reorganized and non-reorganized communities was maintained.

The sample was designed so that the non-reorganized school communities served as the control with which to compare the effectiveness of the educational programs in the reorganized school communities. Previous investigations of reorganized school districts had not used controls. The four major hypotheses of the long term study were constructed with matched community control in mind.

The five communities represented various degrees of reorganization, ranging from the entire high school attendance area to as little as one-half of the area. In all instances, the total high school attendance area was included in the study, but the reorganized part was first analyzed separately. This permitted an analysis of differences between the reorganized and non-reorganized parts of the reorganized communities. If no consistent differences appeared, the results were pooled.

During the 12 years of investigation reported here, district changes have occurred in the non-reorganized communities. Any analysis related to these changes was left for a later date.

Year	School Grade 1	6	9	12	(5 years Post H. S.)	Community Pairs (R-NR)
1949-50	A					Winneconne-Denmark
1950-51	B					Kendall-Cazenovia; Blue River-Wauzeka
1951-52	C					Port Wing-Gilman; East Troy-Waterford
1952-53						
1953-54						
1954-55	A'	A				Winneconne-Denmark
1955-56	B'	B				Kendall-Cazenovia; Blue River-Wauzeka
1956-57	C'	C				Port Wing-Gilman; East Troy-Waterford
1957-58			A			Winneconne-Denmark
1958-59			B			Kendall-Cazenovia; Blue River-Wauzeka
1959-60		A'	C			Winneconne-Denmark Port Wing-Gilman; East Troy-Waterford
1960-61		B'		A		Kendall-Cazenovia; Blue River-Wauzeka Winneconne-Denmark
1961-62		C'		B		Port Wing-Gilman; East Troy-Waterford Kendall-Cazenovia; Blue River-Wauzeka
1962-63			A'	C		Winneconne-Denmark Port Wing-Gilman; East Troy-Waterford
1963-64			B'			Kendall-Cazenovia; Blue River-Wauzeka
1964-65			C'			Port Wing-Gilman; East Troy-Waterford
1965-66				A'	A	Winneconne-Denmark
1966-67				B'	B	Kendall-Cazenovia; Blue River-Wauzeka
1967-68				C'	C	Port Wing-Gilman; East Troy-Waterford
1968-69						
1969-70						
1970-71					A'	Winneconne-Denmark
1971-72					B'	Kendall-Cazenovia; Blue River-Wauzeka
1972-73					C'	Port Wing-Gilman; East Troy-Waterford

Fig. 1. Research Design — Longitudinal Study of Newly Formed Centralized School Districts in Wisconsin

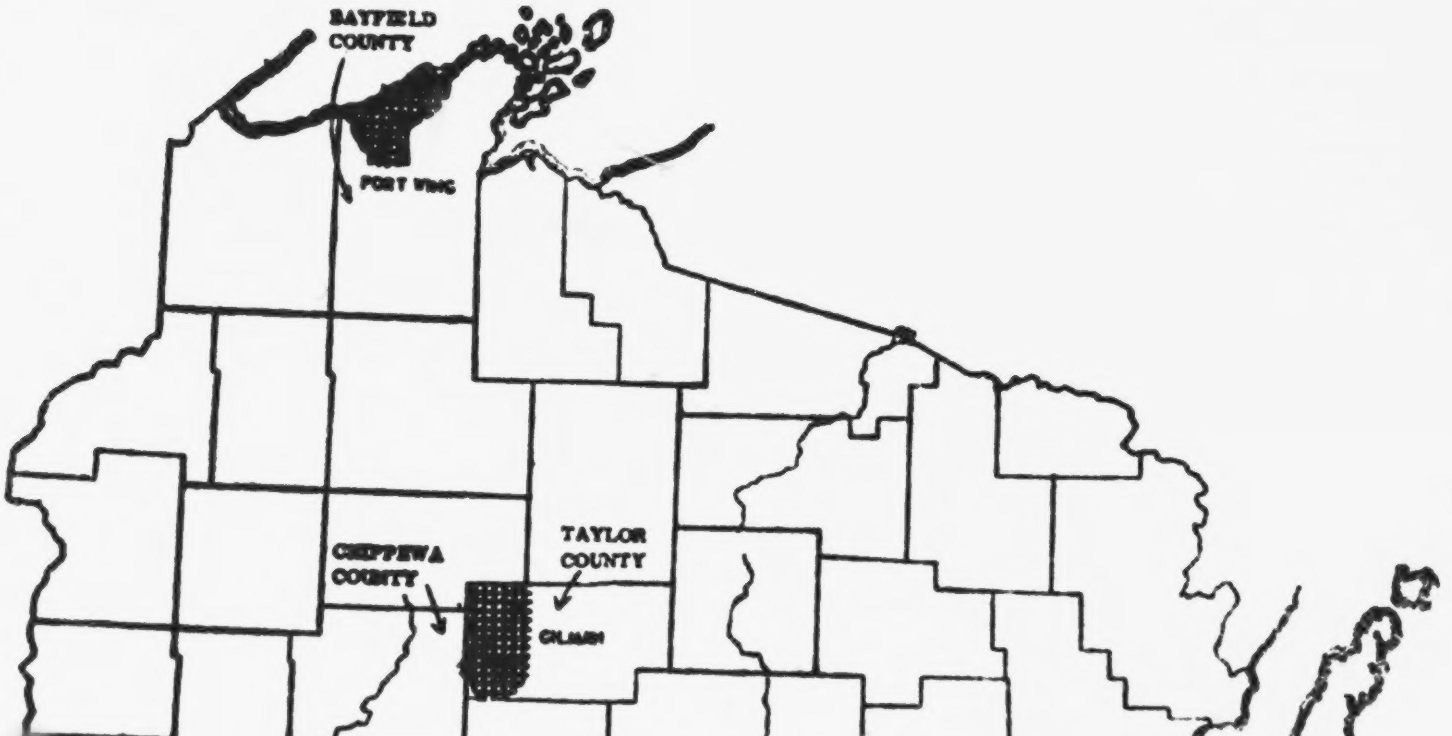
BAYFIELD COUNTY
PORT WING
CHIPPEWA COUNTY
TAYLOR COUNTY
GILMAN
BROWN COUNTY
KEWAUNEE COUNTY
DENMARK
WINNEBAGO COUNTY
WINNECONNE
MANITOWOC COUNTY
MONROE COUNTY
KENDALL
SAUK COUNTY
RICHLAND COUNTY
CAZENOVIA
CRAWFORD COUNTY
WAUZEKA
BLUE RIVER
GRANT COUNTY
WALWORTH COUNTY
EAST TROY
WATERFORD
RACINE COUNTY

Fig. 2. Locations of the 10 Selected Communities in Wisconsin

TABEL 1--Comparison of the Reorganized (Experimental) and Non-reorganized (Control) Communities on Selected Factors

PAIRS OF COMMUNITIES		1950 Village Population	Topography	Type of Farming	Equalized Evaluation (1950)	Miles from Village to Nearest City	Approximate Area (Square Miles)	School Age Children (1950)
Reorganized	Non-Reorganized							
Winneconne		1,078	Rolling and Marshy	Dairy	11,500,000	11	120	749
	Denmark	1,012	Rolling	Dairy	14,031,490	13	180	1,066
Blue River		425	River Valleys Hills	Dairy-Corn	4,380,100	14	100	418
	Wauzeka	564	River Valleys Hills	Dairy-Corn	3,953,600	14	100	395
Kendall		558	Hilly	Dairy	4,500,400	18	100	476
	Cazenovia	403	Hilly	Dairy	4,261,200	18	100	372
Port Wing		300	Rolling	Cutover	4,799,605	30	300	694
	Gilman	402	Rolling	Cutover-Dairy	7,281,533	30	300	999
East Troy		1,052	Gently Rolling	Dairy	16,021,000	25	140	1,049
	Waterford	1,100	Gently Rolling	Dairy	18,072,700	20	160	1,195

Hypotheses

Data collected for the basic research project were analyzed in terms of four null hypotheses:

H_{o1}--There are no differences between reorganized and non-reorganized school communities in the educational opportunities available to the children.

H_{o2}--There are no differences between reorganized and non-reorganized school communities in academic achievement and personal and social behavior of the children.

H_{o3}--There are no differences between reorganized and non-reorganized school communities in educational expenditure. (Expenditure for educational purposes)

H_{o4}--There are no differences between reorganized and non-reorganized school communities in the social and economic contacts of parents with the village center.

To test these major hypotheses, each was stated in a series of sub-hypotheses. The study was designed so that valid conclusions from sub-hypotheses would contribute to conclusions based on the four major hypotheses. It should be mentioned here that, during the period covered in this project, no new data pertaining to hypothesis H_{o3} were analyzed. The findings at the end of grade six were reported in the report of Cooperative Research Project 375.[29]

The first major hypothesis (H_{o1}) was tested by analyzing data on the basis of the following sub-hypotheses:

H_{1a}--There are no differences between reorganized and non-reorganized school communities in the availability of teaching aids and supplemental materials.

H_{1b}--There are no differences between reorganized and non-reorganized school communities in the library resources available for students.

H_{1c}--There are no differences between reorganized and non-reorganized school communities in professional qualifications of teachers and the nature of their assignments.

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[29] Kreitlow, Op. cit.

H_{1d}--There are no differences between reorganized and non-reorganized school communities in building capacities and class size.

H_{1e}--There are no differences between reorganized and non-reorganized school communities in the provisions for staff improvement.

H_{1f}--There are no differences between reorganized and non-reorganized school communities in curriculum offered for students.

To test the second major hypothesis (H_{o2}), the following sub-hypotheses were tested:

H_{o2x}--There are no differences between ~~the reorganized~~ and non-reorganized parts of reorganized school communities in academic achievement.

H_{o2y}--There are no differences between the reorganized and non-reorganized parts of reorganized school communities in socio-economic status and personal and social behavior factors.

H_{2a}--There are no differences between boys and girls in the reorganized and non-reorganized school communities in academic achievement.

H_{2b}--There are no differences between reorganized and non-reorganized school communities in academic achievement of students.

H_{2c}--There are no differences between boys and girls in socio-economic status and personal and social behavior in reorganized and non-reorganized school communities.

H_{2d}--There are no differences between the reorganized and non-reorganized school communities in socio-economic status and personal and social behavior of students.

The fourth listed major hypothesis (H_{o4}) was tested by analyzing data on the basis of the following sub-hypotheses:

H_{4a}--There are no differences between reorganized and non-reorganized school communities in the extent to which parent respondents used the village centers for socio-economic services.

H_{4b}--There are no differences between reorganized and non-reorganized school communities in the extent to which parents used the village for each of 11 selected services.

H_{4c}--There are no differences between reorganized and non-reorganized school communities in the response of those residing in farm neighborhoods other than the immediate neighborhood of the village center about their social and economic contacts with the village center.

H_{4d}--There are no differences between respondents in reorganized and non-reorganized school communities in the extent of change of the contacts with the village center on a total of 11 selected services.

Methodology

Tests were conducted among twelfth grade students in the high schools according to the schedule determined when the initial study was begun in 1949. This portion of the Long Term Study covered a three-year period as noted in Table 2. Two schools were visited for purposes of inquiry during 1960-61; four during 1961-62; and four during 1962-63. All schools were visited during February or March of those years. Throughout the report, the following symbols will identify segments of the sample.

R = the total sample of youngsters in the selected reorganized school communities. This includes both those in the reorganized district and those in the community who were not a part of the reorganized district when the study began.

R only = the sample of youngsters in the reorganized part of the selected reorganized community. This excludes those in the community who were outside of the actual boundaries of the reorganized school district when it was formed.

NR part = the sample of youngsters in the selected reorganized community but not in the reorganized school district. These youngsters are usually on the fringes of the farm service area several miles from the village center.

NR = the total sample of youngsters in the communities selected because they had not reorganized their school districts at the time the study began.

TABLE 2--Schedule for Twelfth Grade Testing

1960-1961		1961-1962		1962-1963	
Winneconne	R	Blue River	R	Port Wing	R
Denmark	NR	Wauzeka	NR	Gilman	NR
		Kendall	R	East Troy	R
		Cazenovia	NR	Waterford	NR

R = Reorganized NR = Non-reorganized

Data Collected

To solve the major hypotheses, appropriate data related to each sub-hypothesis were collected. Examples of the types of data needed to test each hypothesis follow:

> H_{o1}--availability of teaching aids and material library resources for students, and the qualifications and assignments of teachers.

Data used in testing this hypothesis included teachers' educational qualifications, experience and salary, and opportunities for in-service training. Also included were items related to building capacity and enrollments, teacher-pupil ratios, and availability of special services for teachers.

> H_{o2}--achievement test scores in reading, arithmetic, English, social studies and science, level of intelligence identified as mental age in months, and ratings on social and personal behavior inventories.

> H_{o4}--social-economic status scores of the families in the study (the Sewell Socio-Economic Status Scale was used), social economic service patterns of families in the study and extent of service provided by the village center to the farm service area.

Data Collecting Instruments

Data required for testing hypothesis H_{o1} were collected by a review of local school reports and reports on file in the State Department of Public Instruction.

The research instruments used to test hypothesis H_{o2} and its various sub-hypotheses were: standardized test batteries, an interest inventory, a personal-social behavior inventory. Data to test hypothesis H_{o4} were collected by parent questionnaires sent home with the subjects. If it was not returned promptly, a personal interview was held with the parents of the subjects.[30]

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[30] See Appendix A

Standardized Tests

Form H of the seventh edition Kuhlmann-Anderson Intelligence Tests was used to determine the intelligence level of twelfth grade students. This was chosen because it discriminates between small increments of mental development, has limited cultural bias as a group test, shows high validity on recent tests, the timing procedures have little effect on scores, it is highly reliable and extreme deviations on certain kinds of ability do not unduly influence total score.

One variation from tests used in the earlier stages of the investigation was the substitution of the California Achievement Test (Advanced Forms AA and W) for the Metropolitan Achievement Test in grade twelve. A change was necessary because the Metropolitan Test was undergoing a needed up-dating which was not available at the time twelfth grade testing was to begin. Of the standardized achievement tests, the California Test was most comparable to the curriculum areas covered in Metropolitan Tests at first, sixth, and ninth grade levels; and it had been recently up-dated, thus making possible its use for both the completion of the initial study and the replication.

Reliability coefficients reported in the manual for the Advanced Form AA ranged from a low of .83 on sub-test three (American History, 1877-1918) to .92 on sub-test six (Biological Sciences). The standard error of measurement varied from 2.9 on sub-test three to 5.7 on sub-test six. Sub-tests one, two, three, and four (comprising Parts I and II of this battery) were designed to test the student's knowledge of American History from colonization through 1950. Sub-tests five and six (making up Part III) were used to test the student's mastery of Physical and Biological Science.

Reliability coefficients for the Advanced Form W were reported to range from .83 for sub-test six (Spelling) to .96 for the Reading and

Mathematics sub-tests. Standard error of measurement for raw scores showed a high of 4.8 for sub-test five (mechanics of English) to a low of 2.5 for sub-test six. Sub-tests one and two were used to measure the student's reading ability; three and four tested mathematics reasoning and fundamentals; sub-test five measured skills in Mechanics of English; and sub-test six tested the students ability to spell.

The inventory of the student's personal and social behavior characteristics was adapted from the California Test of Personality Elementary Form AA. This test was selected because five of its 12 components resembled the non-academic advantages of reorganization listed most often by a group of school administrators from reorganized school districts. Elements of the five components were altered slightly to make them more applicable to the rural areas in which the ten schools were located.[31]

Error Limit

An *a error* limit of $P \leq .05$ was accepted as appropriate for the data analyzed in this study. With this *a error* limit, a true hypothesis will be rejected on the average only five times or less in 100, over a great many cases.

Statistical Analyses

Selection of the communities on the basis of both educational and community criteria made it possible to assume randomness with a reasonably high potential of validity. Thus, when appropriate, data were analyzed by parametric statistical techniques. Those used in the analysis for hypothesis H_{O2} were Analysis of Variance (ANOVA) and Analysis of Covariance. When appropriate to test for differences as to the presence of selected factors in Reorganized and Non-reorganized districts, the Chi-square test was used.

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[31] See Appendix B.

Much of the data related to hypotheses H_{o1} and H_{o4} dealt with summaries by communities rather than by individual subjects or by numbers of teachers. In these instances, data were presented in a descriptive fashion. The rejection or failure to reject a hypothesis was based on Chi-square and, in a limited number of instances, on a judgment that if the actual differences over the five pairs of communities were two or greater, the hypothesis was rejected. (For example: five reorganized districts might have television in classrooms and three non-reorganized districts might have television).

Summary

Data were collected and selected aspects analyzed and reported for twelfth grade boys and girls in the original group of the 10 selected Wisconsin school communities. Related data from the analysis at first, sixth, and ninth grades were included.

Data for testing the hypotheses and sub-hypotheses were collected by review of local school and State Department of Public Instruction reports, by specially designed questionnaires to parents, by inventories completed by the students, and by standardized tests. Standardized tests used were the Kuhlmann-Anderson Intellignece Test Battery and the California Achievement Test.

The data were analyzed by ANOVA, by Analysis of Covariance, and by Chi-square. The level of significance $P \leq .05$ was selected to identify significant differences among means. Data not amenable to such analyses were presented and described.

CHAPTER V: ANALYSIS OF DATA

Results of statistical and descriptive analyses appear in this chapter. The first section will analyze variations among teaching aids and materials available to students and teachers, compare teacher qualifications and assignments, describe building capacity and class size, determine the provisions available to aid staff, and compare curriculum offerings between reorganized and non-reorganized school communities. Analyses in this section concern the major hypothesis (H_{o1}) and its related sub-hypotheses.

The second section will present the analysis of data used in testing major hypothesis (H_{o2}) and the several sub-hypotheses pertaining to academic achievement and personal and social development of the students in the 10 selected school communities.

Section three discusses the major hypothesis (H_{o4}) and its related sub-hypotheses. Differences between reorganized and non-reorganized school communities in contact with the village center are described and analyzed.

Opportunities Available

Increased opportunities for students has long been the justification for the reorganization of school districts. The earlier report of this investigation validated that reason with considerable clarity at the elementary level. The null hypothesis (H_{o1}) There are no differences between reorganized and non-reorganized school communities in the educational opportunities available to the children will deal with the secondary school level and seek further validation or rejection of improved opportunities as a reason for reorganizing school districts.

Teaching Aids and Materials

Hypothesis H_{1a} was formulated on the assumption that the availability of teaching aids and supplemental material are valuable adjuncts to any teaching program. The teaching aids and supplemental materials discussed are representative of items available to, or used by, teachers in carrying out educational programs at the secondary level.

Data from school records showed the availability of incomplete audio and visual equipment in both reorganized and non-reorganized school communities. Four of the five reorganized communities reported availability of radios for classroom use. All but one of the five reorganized communities reported availability of television sets for classroom use. Three reported availability of both micro and overhead-type projectors. Of the schools reporting in the non-reorganized communities, three indicated availability of radio receivers, four of the five have indicated availability of television receivers. One reported availability of a micro projector and overhead projector.

Table 3 summarizes data relating to expenditure for audio-visual equipment in the 10 communities. Reorganized communities spent an average of $693.48 for audio-visual equipment in the year preceding data gathering at twelfth grade. Non-reorganized communities spent $741.81. The average expenditure per pupil was $2.84 for reorganized and $2.85 for non-reorganized resulting in a difference of one cent per pupil. Department of Public Instruction records showed that during the year in question, they had recommended greater expenditure for equipment in two of the reorganized and in two of the non-reorganized communities.

Hypothesis H_{1a} was rejected as it related to micro projectors and overhead projectors with the advantage to the reorganized district. H_{1a} failed to be rejected for radio, television, and expenditure per pupil for audio-visual equipment.

Library Resources

Hypothesis H_{1b} deals with the library resources available for students in the high schools of the reorganized and non-reorganized districts.

TABLE 3--Expenditure for Audio-Visual Equipment in Reorganized and Non-Reorganized School Communities the Year Previous to Testing

School	R or NR	Total Expenditure	Total Enrollment	Per Pupil Expenditure
Winneconne	R	$ 500.00	295	$1.69
Blue River	R	118.20	126	.94
Kendall	R	1,336.33	295	4.52
Port Wing	R	227.02	157	1.45
East Troy	R	1,285.88	344	3.73
Denmark	NR	133.56	321	3.21
Wauzeka	NR	206.25	121	1.70
Cazenovia	NR	1,600.00	217	7.38
Gilman	NR	1,444.25	290	4.98
Waterford	NR	625.00	450	1.38

Differences in available library resources as identified by the number of volumes in the library, the number discarded, the number added, and the number of class periods assigned for library work are shown in Table 4. It was noted that the non-reorganized communities had slightly more library resources than did the reorganized. In comparing the matched pairs of communities, the reorganized had more volumes in three pairs and the non-reorganized had more volumes in two of the pairs.

Within the reorganized schools, the range between the schools having the smallest number of books and that having the largest number was 1,537 volumes to 3,600 volumes. In non-reorganized schools, the range was from 989 volumes to 4,503 volumes.

Of the 10 libraries studied, the range between the library which added the smallest number of new volumes and the one adding the largest number was from 99 to 800. There was no important relationship noted between the size of the library and in volumes added. Gilman (NR), with a library of 4,505 volumes, added only 205 new books compared with 218 volumes added to the Kendall (R) library where there were 1,873 books. Nor was there a relationship between the number of books added and the number discarded. For example, Waterford (NR) added 800 volumes and discarded only 26, and Cazenovia (NR) added 200 volumes but discarded 100. No characteristic points to a significant difference in library service between schools in reorganized and non-reorganized communities in terms of volumes contained in respective libraries.

State Department records showed that three of the non-reorganized communities received recommendations to increase their services, and one of the reorganized districts received such a suggestion.

In the year when the students involved in the research were in grade 12, the budget for library book expenditures was $5,910 for the 1,217 students in

TABLE 4--Library Resources in Reorganized and Non-Reorganized School Districts

School	R or NR	No. of Volumes in Library	No. of Volumes Discarded in Past Year	No. of Volumes Added in Past Year	No. of Periods Assigned for Library Work
Winneconne	R	2,671	15	183	7.0
Blue River	R	1,537	90	99	3.5
Kendall	R	1,873	36	218	2.0
Port Wing	R	1,929	56	219	2.5
East Troy	R	3,600	0	635	6.0
Denmark	NR	2,120	46	167	3.0
Wauzeka	NR	989	25	102	3.0
Cazenovia	NR	1,200	100	200	7.0
Gilman	NR	4,503	14	205	6.0
Waterford	NR	3,720	26	800	7.0
Totals	R	11,610	197	1,354	21.0
	NR	12,532	211	1,474	26.0
Average	R	2,322	39.4	271	4.20
	NR	2,506	42.4	295	5.20

the reorganized districts, and $3,975 for the 1,399 students in the non-reorganized districts. For periodicals the preceding year, the expenditures were $1,108.69 and $1,099.00, respectively. Total library expenditures showed that the reorganized districts were spending considerably more than the non-reorganized districts to upgrade their services--$8,983.00 and $6,404.00, respectively.

H_{1b} was rejected, as it referred to the expenditure of reorganized and non-reorganized districts for library services the year the subjects in this investigation were in grade 12. The reorganized districts made the greatest expenditure of funds. H_{1b} failed to be rejected on other library services, including the number of volumes in the library, number added, number discarded, and the number of class period assigned to library work.

Staff Qualifications and Assignments

H_{1c} was designed to test whether or not there were consistent differences between the qualifications and assignment of teachers in reorganized and non-reorganized communities.

In Table 5, a comparison is made between teachers in reorganized schools and teachers in non-reorganized schools with regard to salaries. This revealed that the average (mean) salary for teachers in reorganized schools was $5,386.30, and for teachers in non-reorganized schools it was $5,085.35--for a difference of approximately $300.00 in favor of staff members of reorganized schools. The average salary for all 10 schools ranged from $4,625.00 for Waterford (NR) to $6,055.00 for East Troy (R). This was one of the five matched pairs of communities in the investigation.

Table 6 indicates the number of teachers, reorganized and non-reorganized, whose salaries fitted into selected ranges from $4,000 to $8,000. There was a noticeable difference between reorganized and non-reorganized within the

TABLE 5--Differences Between Reorganized and Non-Reorganized Districts Regarding Factors Relating to Staff--Salaries, Educational Background, Years of Experience, Qualifications and Continuing Education Practices

School	R or NR	No. of Full-Time Teachers	Mean Salary	Mean No. of Years of School After High School	No. Staff with Special Licenses (temporary)	Mean No. of Years of Experience	Number of Staff taking Summer School or Correspondence
Winneconne	R	20	$5,391.55	4.10	1	10.05	13
Blue River	R	8	5,112.50	4.00	1	7.06	3
Kendall	R	19	5,140.57	4.15	3	6.00	9
Port Wing	R	10	5,231.54	4.27	0	4.55	1
East Troy	R	21	6,055.23	4.23	0	6.26	11
Denmark	NR	14	4,781.28	3.92	0	6.14	3
Wauzeka	NR	8	4,625.00	4.56	0	9.31	0
Cazenovia	NR	11	5,272.72	4.27	3	8.45	3
Gilman	NR	17	5,477.94	4.11	0	9.55	4
Waterford	NR	23	5,269.56	4.32	0	10.60	5

TABLE 6--Differences Between Salary Range in Reorganized and Non-Reorganized Communities

	4,000+ 4,500	4,500+ 5,000	5,000+ 5,500	5,500+ 6,000	6,000+ 6,500	6,500+ 7,000	7,000+ 7,500	7,500+ 8,000	Total No. Teachers
Reorganized									
Number	8	20	21	13	5	2	7	2	78
Percent	10.25	25.64	26.93	16.66	6.41	2.56	8.97	2.56	
Non-Reorganized									
Number	16	22	13	14	4	3	1	0	73
Percent	21.91	30.13	17.80	19.17	5.47	4.10	1.36	0.00	

$4,000 to $4,500 salary bracket. Exactly 10.25 percent of the teachers in reorganized districts were in this lowest salary bracket, while 21.91 percent of non-reorganized were in this bracket. Both reorganized and non-reorganized schools had a large percentage of their teachers represented in the $4,500 to $5,000 salary bracket--25.64 percent or reorganized and 30.13 percent of non-reorganized; 26.93 percent of reorganized teachers are in salary range $5,500 to $6,000, while there is 17.8 percent of non-reorganized in this category. Reorganized and non-reorganized are about equally represented in the number of teachers whose salaries range from $6,000 to $7,000; 8.97 percent reorganized and 9.57 percent non-reorganized. There is an important difference, however, within the $7,000 to $8,000 salary range. In all, 11.53 percent of the teachers in reorganized schools were included in this top bracket, whereas only 1.36 percent of the teachers in non-reorganized schools earned salaries within this range.

Considering the entire $4,000 to $8,000 range, it was noted that 79.47 percent of reorganized teachers earn less than $6,000 and 89.01 percent of non-reorganized teachers earn less than $6,000.

A comparison was made of teachers in reorganized and non-reorganized schools with regard to the number of years of education that teachers obtained beyond high school. The mean number of years for teachers in reorganized schools was 4.15 years, compared with 4.23 years for those in non-reorganized schools.

The number of staff members in each school who have special license to teach was noted for all schools, reorganized and non-reorganized. The total number for reorganized schools was five. The total for non-reorganized schools was three. The three teachers who had a special license in the non-reorganized schools were all in one school.

There was a wide range in the number of years of teaching experience among teachers in all 10 schools. The mean for each is 8.81 years (non-reorganized) and 6.78 years (reorganized).

With regard to the number of full-time teachers who were pursuing summer school or correspondence courses, there was indicated a significant difference between reorganized and non-reorganized. Over 47 percent of the teachers of reorganized schools are enrolled in credit courses, while 20.54 percent of the teachers from non-reorganized schools were so enrolled.

H_{1c} failed to be rejected. There was no noted consistency between teacher qualification and assignment factors at the high school level in reorganized and non-reorganized school communities. The non-reorganized districts had teachers with slightly higher years of training, had fewer special licenses, and had more years of teaching experience. Reorganized districts had higher salaries and participated in significantly more summer school and correspondence courses.

Building Capacity and Class Size

H_{1d} asked whether the differing capacities of the high school buildings in reorganized and non-reorganized communities was such that the opportunities in the two types of communities was different.

In Table 7, the enrollments are categorized by size. It is found that three schools had an enrollment between 100-200, four schools between 201-300, two schools between 301-400, and one school between 401-500.

TABLE 7--Building Capacity and Enrollment in Reorganized and Non-reorganized Schools

School	R or NR	Building Capacity	Total Enrollment	Boys	Girls
Winneconne	R	300	295	129	166
Blue River	R	160	126	71	55
Kendall	R	325	295	152	143
Port Wing	R	200	157	79	78
East Troy	R	425	344	178	166
Denmark	NR	400	321	160	161
Wauzeka	NR	175	121	65	56
Cazenovia	NR	250	217	111	106
Gilman	NR	300	290	142	148
Waterford	NR	450	450	232	218

Total: 2616 Total R: 1217 Total NR: 1399
Average R: 243.4 Average NR: 279.8

Of all 10 schools, the smallest and the largest enrollments, 121 and 450, were in non-reorganized schools. However, the low enrollments for both types of schools were very similar; 121 for NR schools, and 126 for R schools. There was a larger difference between the high enrollment schools; 344 pupils was the largest enrollment in a reorganized school, while 450 was the top enrollment in non-reorganized schools.

A total of 2,616 students were enrolled in the 10 high schools of both types of districts. A total of 1,217 students were enrolled in reorganized schools, for an average of 243.4 pupils per school; and 1,399 were in non-reorganized schools, for an average of 279.8 per school.

In terms of building capacity and total enrollment, it appeared that three schools were faced with a capacity enrollment. Building capacity for Winneconne, a reorganized school, was 300; and the enrollment during 1960-61 was 295. Gilman, a non-reorganized school, had a building capacity of 300 and an enrollment of 290. Waterford had a capacity and an enrollment of 450.

East Troy, a reorganized school, and Denmark, a non-reorganized school, appeared to have the greatest capacity for enrollment expansion. East Troy operated with five new classrooms and music rooms at the high school level for the first time during 1962-63.

On June 24, 1959, Winneconne lost a bond referendum for building an addition to the school. School leaders recognized the need to provide classroom space for the expanding student body. Since the time of completion of the field work covered by this research, the three undercapacity schools, reorganized and non-reorganized, did build up to adequate size.

The State Department of Public Instruction informed Kendall that it noted with favor the new high school building and the enlarged district, but it viewed with disfavor the operation of two high schools in the district for an extended period of time, feeling it was not justified.... "Continued payment of aids will be somewhat dependent upon the progress made to solve this problem."

Following the completion of field work on this phase of the research, the reorganized district, of which Kendall is a part, did build new facilities and provided high school level education in one building.

Although minor differences were noted between the reorganized and non-reorganized communities on building capacity, this part of H_{1d} failed to be rejected.

The 1,217 students in the reorganized communities and the 1,399 in the non-reorganized were served by 87 and 84 high school teachers respectively, giving a student-to-teacher ratio that is favorable to those students in reorganized districts.

A review of the State Department of Public Instruction's records showed that teacher duties had all been assigned except the responsibilities for health education in two of the reorganized districts, and for guidance in one reorganized district.

The high school principals in non-reorganized districts were given more duties in addition to their regular assignments than were principals in reorganized districts. They averaged nearly one additional assigned duty.

In the provision of guidance services to students, the two types of districts were very similar with total staff in the five reorganized and non-reorganized communities assigned to guidance responsibilities being 3.4 and 3.3 respectively.

It is noted in Table 8 that the average enrollment of high schools in reorganized districts was somewhat smaller than that of non-reorganized districts. The average for reorganized being 243.4 pupils and for non-reorganized being 279.8 pupils. For all 10 schools, the range in student enrollment is from 121 in Wauzeka (non-reorganized) to 450 in Waterford (non-reorganized). The range within the reorganized schools only, was from 126 in Blue River to 344 in East Troy.

TABLE 8--Differences between Reorganized and Non-reorganized Districts in Relation to Total Enrollment, Pupil/Teacher Ratio, and Class Sections Per Number of Students in Academic and Physical Education Classes

School	R or NR	Enroll-ment	Pupil/ Teacher Ratio	No. of Class Sections with 35 or more Pupils	No. of Class Sections with 15 Pupils or less	No. of Phy. Ed. Classes with 40 or more Pupils	No. of Phy. Ed. Classes with 20 Pupils or less
Winneconne	R	295	15:1	2	3	4	0
Blue River	R	126	15:1	0	3	0	0
Kendall	R	295	15.6:1	4	25	1	3
Port Wing	R	157	16.5:1	0	11	0	0
East Troy	R	344	15:1	0	20	0	2
Denmark	NR	321	20:1	0	2	-	-
Wauzeka	NR	121	15.8:1	0	9	0	0
Cazenovia	NR	217	17:1	1	1	0	1
Gilman	NR	290	17.9:1	0	7	0	1
Waterford	NR	450	18.5:1	0	1	0	0
Summary (Means)	R	243.4	15.42:1	1.02	12.4	1	1
	NR	279.8	17.84:1	.20	4	0	.40

The school having the highest total enrollment also had one of the highest pupil/teacher ratios. The highest pupil/teacher ratio occurred in the school having the third highest enrollment. The overall range for the 10 schools for pupil/teacher ratio extended from 15 pupils per teacher to 20 pupils per teacher. Within the reorganized districts, the average pupil/teacher ratio was 15.42:1 and in non-reorganized districts it was 17.84:1.

There were relatively few class sections where the number of students exceeded 35. Within the reorganized schools, the total number of class sections having more than 35 pupils was 6, while there was only one class section within the five non-reorganized sections with more than 35 pupils.

The reorganized schools had a total of 62 class sections where the number of pupils was 15 or less. Within the non-reorganized schools, there were 20 class sections having 15 pupils or less. A total of five physical education class sections were reported by reorganized schools as having 40 or more pupils. Of the four non-reorganized schools reporting on this aspect, none indicated having physical education class sections with 40 or more pupils. Within the reorganized schools, there were five physical education class sections having 20 pupils or less. Within the non-reorganized schools--with four of the five schools reporting, there were two physical education class sections with 20 pupils or less.

The findings concerned with differences in teacher/pupil ratio, assigned duties, school enrollment and class section size between reorganized and non-reorganized school communities, were not consistent; and thus, this part of H_{1d} failed to be rejected.

Provision for Staff

Analysis of the descriptive data related to H_{1e} showed whether or not the reorganized or non-reorganized district provided more professional learning opportunities for teachers within the system. Two important ingredients of such learning opportunities were examined--in-service education and the school's professional library.

Table 9 shows several selected factors which allowed teachers to develop their teaching skills and gain a more thorough understanding of educational concepts.

TABLE 9--Staff Opportunities in Reorganized and Non-reorganized School Districts

School	R or NR	No. of In-service Days	No. of Volumes in Professional Library	No. of Prof. Journals Subscribed	Appropriated for Professional Library
Winneconne	R	5	155	10	$200.00
Blue River	R	4	15	6	25.00
Kendall	R	4	89	4	50.00
Port Wing	R	5	44	9	50.00
East Troy	R	5	50	15	150.00
Denmark	NR	5	80	13	150.00
Wauzeka	NR	2	14	3	50.00
Cazenovia	NR	2	15	6	100.00
Gilman	NR	5	60	5	25.00
Waterford	NR	5	30	5	100.00

In-service training refers to those days of the school year devoted to teacher-centered learning. Included in an in-service program may be several factors: orientation to the school system, explanations of new techniques and equipment, curriculum development, preparation for parent-teacher conferences, and even readying the classroom for pupils. These are only a few of the activities which may be included under the classification of "in-service training." Therefore, the depth and breadth of these days will vary from school to school. Because of this possible variation and in order to judge the adequacy of the program, the State Department of Public Instruction requires a complete schedule of the years' in-service activities from each school.

In-service training may take place before classes have begun, during the school year, or after classes have been concluded for the year. It may involve only the teaching staff of the school, or it may include "experts" from other areas. Among the many factors involved, only the number of days devoted to in-service training are included here and are a sample of this total opportunity.

Of the 10 schools, six scheduled five days of in-service training; two, four days; and two, two days. The two schools scheduling only two days were both non-reorganized communities. The mean number of days of in-service training for the reorganized schools was 4.6; for the non-reorganized schools it was 3.8 days.

The State Department of Public Instruction commented on each school program as it received the information for the year. Not only were Cazenovia and Wauzeka instructed to increase the length of in-service training, but so also was Kendall. Cazenovia, Wauzeka, and Denmark were advised to strengthen their in-service programs. Gilman was commended for improving its program. These records clearly favored in-service programs in reorganized districts.

Professional Library. A professional library refers to those books which deal directly or indirectly with the teaching profession.

There was an extremely large range in the size of professional libraries in the 10 schools, ranging from 14 books at Wauzeka to 125 books at Winneconne.

The smallest number of volumes, 15, in a reorganized district was found at Blue River. The smallest number of volumes in a non-reorganized district, 14, was found at Wauzeka, while Cazenovia, another non-reorganized school, had 15 volumes. It was noted that two of these three schools, Cazenovia and Wauzeka, were also the lowest in providing in-service training.

The mean number of books for schools in reorganized districts was 70.6, while in non-reorganized districts it was 39.8. This was a mean difference of 30.8 volumes between the two types of districts.

The number of professional journals subscribed to by each district also varied. The smallest number of journals subscribed to (three) was found at Wauzeka, a non-reorganized school. The largest number of journal subscriptions was found at East Troy, a reorganized school.

It would be expected that schools with larger staffs would order duplicate copies of professional journals so that circulation would be improved. It is possible, therefore, that East Troy, with a large staff, would order duplicate subscriptions of several magazines; and Wauzeka, with a smaller staff, would not need duplication. This does not explain the fact, however, that Waterford(non-reorganized), with the largest staff of any of the 10 schools, rated near the bottom of the group in terms of journal subscriptions.

The mean number of journals subscribed to by reorganized schools was 8.8, and for non-reorganized schools it was 6.4.

Appropriations for the year's professional library ranged from $25 to $200. Two schools, Blue River (R) and Gilman (NR), appropriated $25 for the year; three schools, Kendall (R), Port Wing (R), and Wauzeka (NR), appropriated $50; two schools, Cazenovia (NR) and Waterford (NR)--$100; two schools, East Troy (R) and Denmark (NR), appropriated $150; and one school, Winneconne (R),--$200.

In total, the reorganized schools appropriated $475 for the year, for a mean of $95 per school. The non-reorganized schools appropriated $425, for a mean of $85 per school.

Hypothesis H_{1e} was rejected on the basis of the descriptive data relating to in-service programs and availability of professional materials. High schools in reorganized communities had considerably more learning opportunities for the teaching staff than did non-reorganized communities.

Curriculum Offerings

Table 10 identifies the general academic and special curricular credit offerings used to test H_{1f} in the 10 communities of the study. Curricular areas where important differences existed favoring reorganized districts were in foreign language and art. The only difference involving two or more schools favoring the non-reorganized school district was in physical education. The reorganized schools had a one-school advantage in home economics and industrial arts, while the non-reorganized schools had that advantage in personal typing and geography.

A review of Table 11 shows considerable similarity between the reorganized and non-reorganized communities on school-lunch programs and the special milk program, and only minor differences on summer classes and classes for the handicapped.

H_{1f} failed to be rejected. Differences between reorganized and non-reorganized districts on curriculum and selected services were not great, nor were they consistent.

Summary-Opportunities

Six sub-hypotheses of H_{01} were tested by statistical and descriptive methods. There were 38 factors analyzed. Among these factors, there were a greater number on which reorganized districts had the favorable rating. Six of these differences were significant. There was one factor on which non-reorganized districts had the significant favorable rating. Hypothesis H_{01} was rejected in part.

TABLE 10--Curriculum Offerings of the Sample Reorganized and Non-reorganized Communities

	Reorganized					Non-reorganized				
	Winne-conne	Blue River	Kendall	Port Wing	East Troy	Denmark	Wauzeka*	Cazenovia	Gilman	Water-ford
Agriculture	X	X	X	X	X	X	X	X	X	X
Business Ed.	X	10-12 X	X	10-12 X	10-12 X	10-12 X	10-12 X	X	10-12 X	10-12 X
Driver Ed.	10 X	10 X	10 X	10-11 X	10 X	10-12 X	10 X	10 X	10 X	10 X
French					X	X	10-12 X			
Spanish	X		X		X	X	10-12 X			
German			X				10-12 X			11-12 X
Latin	X						10-12 X			10-12 X
Health & Safety		X	X	X	X	X		X	X	X
Home Economics	X	X	X	X	X	X	X	X		X
Industrial Arts	X	X	X	X	X	X	X		X	X
Language Arts	X	X	X	X	X	X	X	X	X	X
Math	X	X	X	X	X	X	X	X	X	X
Science	X	X	X	X	X	X	X	X	X	X
Social Studies	X	X	X	X	X	X	9,11,12 X	X	X	X
Art	X			11-12 X	X				X	
Personal Typing									9 X	
Geography									X	
Physical Ed.									X	

*Russian by University of Wisconsin Correspondence only.

TABEL 11--A Comparison of Selected Special Services Available in Reorganized and Non-reorganized Communities

School	R or NR	Summer Class	Handicapped Classes	School Lunch	Special Milk Service
Winneconne	R	Yes	0	Yes	Yes
Blue River	R	No	0	Yes	No
Kendall	R	No	0	Yes	Yes
Port Wing	R	No	0	Yes	Yes
East Troy	R	No	0	Yes	Yes
Denmark	NR	No	Speech Correction	Yes	Yes
Wauzeka	NR	No	0	Yes	Yes
Cazenovia	NR	No	0	Yes	Yes
Gilman	NR	--	0	Yes	Yes
Waterford	NR	No	0	Yes	No

Achievement

Previous analysis through the ninth grade showed that achievement test scores favored both boys and girls in reorganized communities. Through that stage in their school career, the subjects of this investigation who lived in reorganized school communities had higher academic achievement. Girls profited more than boys from the reorganization of school districts.

In the longitudinal study, the students in larger reorganizations attained higher achievement than those in the smaller reorganizations. In a cross-sectional comparison, no significant differences were found among reorganizations categorized by size of student population.

Data on personal and social behavior through grade six showed no differences between girls in reorganized and non-reorganized communities. There were differences between the boys in the two types of school communities. With related factors controlled, boys in non-reorganized communities scored higher on the total test and on the section Sense of Personal Worth.

Reorganized and Non-reorganized Parts

In the initial selection of reorganized communities for this investigation, certain communities had not completed the reorganization process. This necessitated an estimate of the future boundaries of the district when reorganization was actually completed. This had not occurred in the selected communities at the time the first grade subjects were tested in 1949 through 1951, but all of these areas later became part of the reorganized community. Throughout the investigation, this early "non-reorganized part" of the reorganized communities has been kept separate, subject to pooling with the "reorganized part" if and when the null-hypothesis of no difference between these parts would fail to be rejected.

Table 12 summarizes the data relative to the hypothesis H_{o2x} that there is no difference in academic achievement scores between boys and girls in

TABLE 12--Analysis of Variance of Twelfth Grade Academic Achievement Scores for Boys and Girls in the Initially Reorganized Part and in the Non-reorganized Part of Communities Classified as Reorganized

Factor	N	Mean Score				Significant (S) or Non-significant (NS)
		Boys R Part	Boys NR Part	Girls R Part	Girls NR Part	
Mental Age	134	229.754	229.321	239.386	245.700	NS
Reading Comprehension	134	47.316	44.538	52.965	55.200	NS
Reading Vocabulary	134	37.316	32.000	38.930	45.100	NS
Total Reading	134	85.211	76.538	92.105	100.300	NS
Arithmetic Fundamentals	111	54.489	58.091	60.449	62.222	NS
Arithmetic Reasoning	111	38.400	38.636	41.163	41.333	NS
Total Arithmetic	111	92.889	96.727	101.959	103.556	NS
English Mechanics	111	95.044	97.091	111.816	115.889	NS
History and Civics	125	117.434	114.333	123.057	123.100	NS
Total Social Studies	125	118.491	114.333	123.057	123.100	NS
Biological Science	125	64.472	61.917	67.170	67.700	NS
Physical Science	125	44.245	42.167	43.000	42.300	NS
Total Science	125	107.321	104.083	110.170	110.000	NS
Spelling	125	14.396	12.417	19.000	20.900	NS
Total Achievement	125	513.453	503.083	559.850	569.500	NS

the non-reorganized part and the reorganized part of the communities classified as reorganized.

It is noted in Table 12 that there are no differences significant at the $P \leq .05$ level between these two groups of students. Thus, the hypothesis H_{o2x} failed to be rejected. However, scores between the boys in the non-reorganized and the reorganized part of the reorganized districts tended to favor boys in the reorganized part with a 10-point spread on the total achievement score. The reverse was true for girls, with a 10-point advantage for those in the non-reorganized part.

The hypothesis H_{o2x} failed to be rejected. Thus, it was possible to pool the results from the non-reorganized and the reorganized part of the reorganized district on achievement factors. Henceforth, analysis of achievement factors will be used in the combined groups, and they will be labeled "Reorganized."

Table 13 shows that for hypothesis H_{o2y} there are no significant differences at the $P \geq .05$ level between students in the reorganized and non-reorganized parts of the reorganized districts on socio-economic and personal and social behavior scores. This made it possible to also pool these results into a single group labeled "Reorganized."

However, there is some consistency of favorability for the boys in the non-reorganized part and for girls in the reorganized part of the reorganized school communities noted in Table 13.

ANOVA Academic Factors

Following the pooling of the data from the reorganized and non-reorganized parts of the reorganized district, it was possible to test hypothesis H_{o2}--There are no differences between reorganized and non-reorganized school communities in academic achievement and personal and social behavior of the students.

TABLE 13--Analysis of Variance of Twelfth Grade Socio-economic and Personal and Social Behavior Scores for Boys and Girls in the Initially Reorganized Part and in the Non-reorganized Part of Communities Classified as Reorganized

Factor	N	Mean Score				Significant (S) or Non-significant (NS)
		Boys R Part	Boys NR Part	Girls R Part	Girls NR Part	
Socio-economic Status	111	78.245	76.545	79.163	78.222	NS
Parent's Chance of Child's Education	116	3.458	3.500	3.346	3.556	NS
Sense of Personal Worth	116	8.917	10.100	10.462	10.111	NS
Feeling of Belonging	116	10.042	11.000	10.846	10.222	NS
Social Standards	116	9.958	9.800	10.981	10.889	NS
Social Skills	116	8.229	9.200	9.962	9.556	NS
Community Relations	116	8.604	9.100	9.885	9.889	NS
Total Personal Social Behavior	116	45.729	49.200	52.115	50.667	NS

The students used for these analyses were only those who had been part of the study in first grade between 1949 and 1952, and for whom complete data were available at the times when the communities were investigated through 1963. It is in relationship to this group of 300 boys and girls that the following analyses were made and the findings reported.

Table 14 shows the means and F ratio for each part of the sub-hypothesis H_{2a} related to academic achievement for boys and girls in reorganized and non-reorganized school communities. Fifteen measures of academic achievement are shown with the historical and expected differences between boys and girls clearly evident. There were 10 instances of significant differences with all showing higher achievement by the girls (except in the case of physical science where the boys excelled). Those five which were not significant showed mean scores favoring girls. H_{2a} was rejected. Girls had the higher mean scores.

Previous results of this longitudinal study suggest that the early differences favoring students in reorganized communities would continue, but the wide gap noted at grades six and nine would close somewhat during the high school years. The results of the test of H_{2b} verify that expectation. On academic achievement, there are three instances where the differences were sufficiently large to reject the null hypothesis. (1) The first rejection was for mental age. In reorganized school communities, boys had a 6-month and girls a 13-month mental maturity superiority over those in non-reorganized communities. These youngsters, when tested in the first grade, showed no mental maturity differences. After 12 years in the two types of school districts, the difference was 1/2 year (6 months) for boys and over a year (13 months) for girls.

In addition to mental age differences, there was a significant difference favoring those in reorganized districts on (2) Total Reading scores and

TABLE 14--Analysis of Variance of Twelfth Grade Academic Scores for Boys and Girls in Reorganized and Non-reorganized School Communities

Factor	N	Mean Score				F Ratio S = Significant NS=Non-significant Girls vs. Boys	F Ratio S = Significant NS=Non-significant Reorganized vs Non-reorganized
		Boys Reorganized	Boys Non-reorganized	Girls Reorganized	Girls Non-reorganized		
Mental Age	300	229.657	223.214	240.328	227.191	4.353 (s)[a]	7.778 (s)[b]
Reading Comprehension	300	46.800	46.010	53.299	48.221	7.492 (s)[b]	NS
Reading Vocabulary	300	36.329	34.918	39.851	37.162	5.021 (s)[a]	NS
Total Reading	300	83.600	80.724	93.328	85.015	6.496 (s)[a]	4.138 (s)[a]
Arithmetic Fundamentals	271	55.196	55.245	60.724	59.227	7.013 (s)[b]	NS
Arithmetic Reasoning	271	38.446	37.809	41.190	36.985	NS	NS
Total Arithmetic	271	93.643	93.064	102.207	96.061	3.893 (s)[a]	NS
English Mechanics	271	95.446	95.915	112.448	113.045	62.662 (s)[b]	NS
History of Civics	289	116.862	113.896	123.063	115.647	NS	NS
Total Social Studies	289	117.723	113.896	123.063	115.647	NS	NS
Biological Science	289	64.000	61.417	67.254	63.765	NS	4.164 (s)[a]
Physical Science	289	43.862	43.979	42.889	41.132	4.102 (s)[a]	NS
Total Science	289	106.723	105.396	110.143	104.897	NS	NS
Spelling	289	14.031	14.240	19.302	19.741	79.834 (s)[b]	NS
Total Achievement	289	511.538	503.531	561.365	534.941	10.842 (s)[b]	NS

[a] Significant at $P \leq .05$
[b] Significant at $P \leq .01$

on (3) Biological Science scores. The actual score differences gave an advantage of three points for boys and eight points for the girls in Total Reading mean scores, and three points for boys and four points for girls on Biological Science mean scores. Hypothesis H_{2b} was rejected in part and failed to be rejected in part.

There was considerable consistency in the academic achievement differences favoring boys and girls in reorganized school communities. It is noted in Table 14 that twelfth grade boys in reorganized communities achieved higher on 11 of the 15 measures, and twelfth grade girls in reorganized communities achieved higher on 13 of 15 measures.

Figure 3 shows the change in the advantage of non-reorganized to reorganized districts between grade one and grade six and the consistency of this advantage in favor of reorganized school communities from sixth grade through grade twelve. There were 11 achievement measures in grade one, and 22, 11, and 15 measures in grades 6, 9, and 12 respectively.

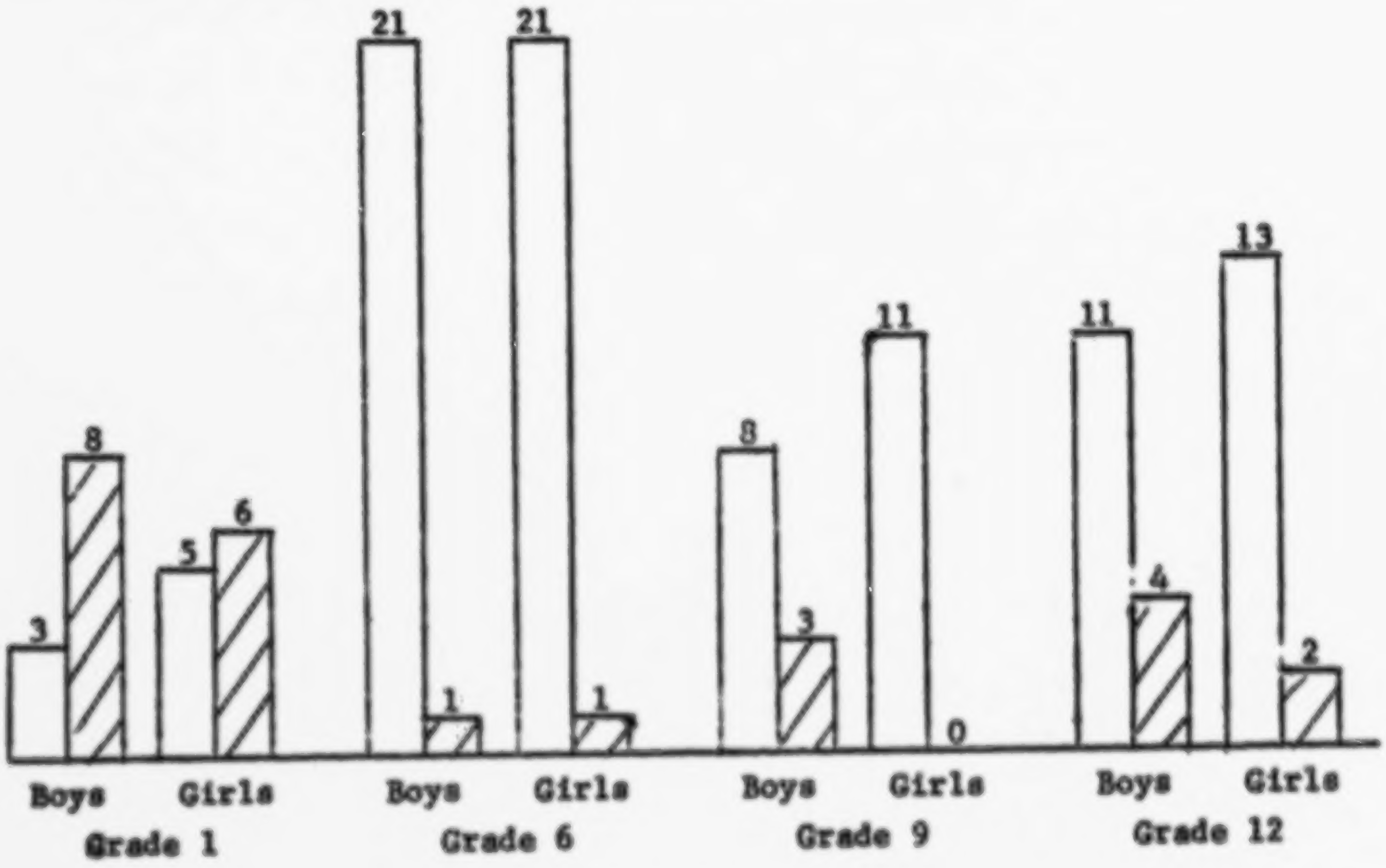

FIGURE 3--Achievement Differences between Reorganized Part of Reorganized Communities and Non-reorganized School Communities Grades 1, 6, 9, and 12

ANOVA Social Factors

Table 15 identifies the means and F ratio for each part of sub-hypothesis H_{2c} related to socio-economic status and personal and social behavior differences between the boys and girls in the reorganized and non-reorganized school communities. For socio-economic status between boys and girls, the difference was slight and not significant. On the parts and total scores of the Personal and Social Behavior Inventory, the expected differences between boys and girls on each factor (except the Feeling of Belonging) was present in a statistically significant quantity. H_{2c} is rejected for the personal and social behavior factor showing differences between boys and girls.

The part of sub-hypothesis H_{2d} related to socio-economic status failed to be rejected with nearly identical scores for families of the subjects in the investigation living in reorganized and non-reorganized school communities.

No significant difference was found in the level of education sought for their children by parents in reorganized and non-reorganized communities.

The differences noted in grade six, showing significant differences favoring boys in non-reorganized districts on Sense of Personal Worth and on the Total Personal Social Behavior score, appeared again in grade 12 when this part of H_{2d} was tested. Thus, this part of the sub-hypothesis H_{2d} was rejected.

ANCOVA Academic and Social Factors

Certain achievement and social and personal behavior factors showed statistically significant differences when tested by means of ANOVA. For these, hypotheses H_{2a}, H_{2b}, H_{2c}, and H_{2d} were tested one additional step, using analysis of covariance as the statistical tool. By this means, it was possible to control the influence of factors which earlier in the investigation had been shown to have a high relationship with those being examined and on which appropriate data were available.

TABLE 15--Analysis of Variance of Twelfth Grade Socio-economic and Personal and Social Behavior Scores for Boys and Girls in Reorganized and Non-reorganized School Communities

Factor	N	Mean Score				F Ratio S = Significant NS=Non-significant	F Ratio S = Significant NS=Non-significant
		Boys Reorganized	Boys Non-reorganized	Girls Reorganized	Girls Non-reorganized	Girls vs. Boys	Reorganized vs. Non-reorganized
Socio-economic Status	271	77.858	77.638	79.017	76.803	NS	NS
Parent's Choice of Child's Education	279	3.466	3.232	3.377	3.313	NS	NS
Sense of Personal Worth	279	9.121	9.727	10.410	10.828	27.462 (s)[b]	5.058 (s)[a]
Feeling of Belonging	279	10.207	10.626	10.754	10.891	NS	NS
Social Standards	279	9.931	9.980	10.967	10.859	28.688 (s)[b]	NS
Social Skills	279	8.397	8.889	9.902	10.109	34.389 (s)[b]	NS
Community Relations	257	8.688	9.426	9.923	9.939	18.214 (s)[b]	NS
Total Personal-Social Behavior	279	46.328	49.768	51.902	53.672	34.184 (s)[b]	10.330 (s)[b]

[a] Significant at $P \leq .05$
[b] Significant at $P \leq .01$

Table 16 summarizes the results of analysis of covariance for five dependent variables selected because significant differences between subjects in reorganized and non-reorganized communities were noted at twelfth grade level (Total Reading, Biological Science, Total Personal Social Behavior, Sense of Personal Worth) or differences noted at the sixth and ninth grade levels had suggested such a follow-up (Community Relations).

The twelfth grade Total Reading scores were subjected to Analysis of Covariance controlling mental age at grade six and socio-economic status of the family when the subject was in grade six (Table 16). Under these conditions the F values were as follows:

a) Differences between boys and girls

> F = .170 with df = 1 and 166. This part of hypothesis H_{2a} failed to be rejected. There were no significant differences between the twelfth grade scores of boys and girls on Total Reading with mental age (grade six) and socio-economic status (grade six) controlled.

b) Differences between reorganized and non-reorganized communities

> F = 2.245 with df = 1 and 166. This part of hypothesis H_{2b} failed to be rejected. There were no significant differences between twelfth grade Total Reading scores in reorganized and non-reorganized districts with mental age and socio-economic status controlled.

Thus, the difference which was noted between reorganized and non-reorganized districts can be accounted for by either or both mental age and socio-economic status differences. The greater contributions to this difference noted initially was likely to be from mental age differences at grade six which showed means of 147 and 155 for boys and girls in reorganized districts, and 145 and 154 for those in the non-reorganized districts. Socio-economic status differences were 75 and 77, and 75 and 74 respectively.

TABLE 16--Summary of Means and F Ratios Obtained by the Analysis of Co-Variance Applied to Selected Academic and Personal and Social Behavior Factors

Dependent Variables	N	Independent Variables	Mean Score (Dependent Variable)				F Ratio Girls vs. Boys	F Ratio Reorganized vs. Non-reorganized
			Boys Reorganized	Boys Non-reorganized	Girls Reorganized	Girls Non-reorganized		
Total Reading	168	Mental Age (6) Socio-economic Status (6)	83.600	80.700	93.300	85.000	.170 NS	2.245 NS
Biological Science	168	Mental Age (6) Socio-economic Status (12)	64.000	61.400	67.300	63.800	.480 NS	.269 NS
Total Personal Social	168	Socio-economic Status (6)	46.300	49.800	51.900	53.700	19.314 (s)[b]	6.851 (s)[a]
Sense of Personal Worth	168	Socio-economic Status (6)	9.100	9.700	10.400	10.800	19.363 (s)[b]	3.334 NS
Community Relations	168	Socio-economic Status (6)	8.700	9.400	9.900	9.900	8.692 (s)[b]	.595 NS

[a] Significant at $P \leq .05$

[b] Significant at $P \leq .01$

The scores at twelfth grade on the Biological Science test were checked for differences using Analysis of Covariance controlling mental age at grade six, socio-economic status of the family when the subject was in grade six, and Total Arithmetic score at grade twelve. Under these conditions, the F values were as follows:

a) Difference between boys and girls

> F = .480 with df = 1 and 165. This part of hypothesis H_{2a} failed to be rejected. There were no significant differences between the twelfth grade scores on the Biological Science test with mental age (grade six), socio-economic status (grade six), and Total Arithmetic score (grade twelve) controlled.

b) Differences between reorganized and non-reorganized communities

> F = .269 with df = 1 and 165. This part of hypothesis H_{2b} failed to be rejected. There were no significant differences between the twelfth grade Biological Science scores in reorganized and non-reorganized districts with mental age (grade six), socio-economic status (grade six), and Total Arithmetic score (grade twelve) controlled.

Noting that students in reorganized districts after grade one consistently scored higher on both arithmetic and mental age raises the question of the extent these factors were appropriate to control by statistical means. The more consistent the results, even though individually not significant, the more each related factor would remove from the data that part which might have accounted for any real difference, and which was itself a product of reorganization of school districts.

The total scores at twelfth grade on the Personal and Social Behavior Inventory were checked for differences by Analysis of Co-variance controlling socio-economic status scores of the family at grade six. Under these conditions, the F values were as follows:

a) Differences between boys and girls

> F = 19.314 with df = 1 and 167. This part of hypothesis H_{2c} was rejected. There were differences between the twelfth grade scores on Total Personal Social Behavior Inventory with socio-economic status (grade six) controlled. The girls had the higher mean score.

b) Differences between reorganized and non-reorganized communities

> F = 6.851 with df = 1 and 167. This part of hypothesis H_{2d} was rejected. There were differences at the one percent level between the twelfth grade scores on Total Personal and Social Behavior Inventory with socio-economic status (grade six) controlled. The non-reorganized communities had the the higher mean score.

This finding is comparable to that determined by the analysis of grade nine data which showed significant differences favoring boys in the non-reorganized communities.

The scores at the twelfth grade on Sense of Personal Worth were subjected to Analysis of Co-variance controlling socio-economic status score of the family at grade six. Under these conditions, the F values were as follows:

a) Differences between boys and girls

> F = 19.363 with df = 1 and 167. This part of hypothesis H_{2c} was rejected. There were differences between the twelfth grade scores on Sense of Personal Worth with socio-economic status (grade six) controlled. The girls had the higher mean score.

b) Differences between reorganized and non-reorganized communities

> F = 3.334 with df = 1 and 167. This part of hypothesis H_{2d} failed to be rejected. There were no significant differences between the twelfth grade scores on Sense of Personal Worth with socio-economic status (grade six) controlled.

Of special note here is the fact that at ninth grade, the sub-hypothesis on Sense of Personal Worth was rejected with the effect of socio-economic status removed using Analysis of Co-variance. At grade twelve, the removal of the influence of socio-economic status led to a failure to reject the hypothesis.

The scores at the twelfth grade on Community Relations were subjected to Analysis of Co-variance controlling socio-economic status score of the family at grade six. Under these conditions, the F values were as follows:

a) Differences between boys and girls

F = 8.692 with df = 1 and 167. This part of hypothesis H_{2c} was rejected. There were differences between the twelfth grade scores on Community Relations with socio-economic status (grade six) controlled. The girls had the higher mean score.

b) Differences between reorganized and non-reorganized communities

F = .595 with df = 1 and 167. This part of hypothesis H_{2d} failed to be rejected. There were no significant differences between the twelfth grade scores on Community Relations with socio-economic status (grade six) controlled.

At the ninth grade level, the differences between reorganized and non-reorganized subjects on Community Relations score were such that the hypothesis failed to be rejected when teacher rating at grade one of the Child's Emotional Stability was removed by Analysis of Co-variance. At grade twelve, the same result occurred by removing the influence of socio-economic status at grade six.

Summary-Achievement

It should be noted in the Comprehensive Tables 17 and 18,covering grades 1, 6, 9, and 12 for those subjects who stayed in the reorganized and non-reorganized communities throughout 12 years of their elementary and high school years, that there were no significant differences on academic achievement between these two groups at grade one. At grade one, there were 22 instances of actual mean differences; these differences favored reorganized subjects eight times and favored non-reorganized subjects 14 times.

At grade six, a sharp change in achievement had occurred. There were 16 instances in academic achievement catagories where significant differences had developed and all favored those subjects in the reorganized districts. There were two significant differences noted favoring those subjects in non-reorganized districts. These were social and personal behavior factors on which there was no comparable measure at grade one.

At grade nine, the same pattern prevailed. There were fewer academic achievement measures, but among these, all significant differences favored subjects in the reorganized communities. There were five such instances. Likewise, on the same number of ninth grade personal and social behavior factors as measured in grade six, the subjects in the non-reorganized communities had a significantly higher mean score on all measures.

At grade twelve, there were items worthy of special note on both achievement and social factors. First, mental age differences were significantly different for the first time in 12 years, and this difference was over a one-half year for boys and over one year for girls (in both instances favoring reorganized communities). Significant differences favoring reorganized subjects existed in Total Reading and in Biological Science. Second, the general differences at ninth grade favoring those subjects in non-reorganized districts on personal and social behavior factors changed sharply. At grade nine, there were significant differences on all personal and social behavior variables. At grade twelve, differences were significant only on Sense of Personal Worth and on the Total Personal Social Behavior score. Sense of Personal Worth failed to be rejected when the influence of Socio-economic Status scores were removed.

TABLE 17--A Comparison of Mean Scores on Selected Achievement Factors for those Boys and Girls Who Remained in Reorganized and Non-reorganized School Communities from Grades 1 through 12.*

Achievement Item	Type of District	Boys				Girls				F Ratio and Significant R vs NR
		Grade 1	Grade 6	Grade 9	Grade 12	Grade 1	Grade 6	Grade 9	Grade 12	
Comprehension of Paragraphs and Directions	R		27.4				31.4			6 - 4.301 (s)[a]
	NR		26.3				28.5			
Comprehension of Paragraphs	R	10.0	22.0			12.0	24.0			6 - 4.005 (s)[a]
	NR	9.6	21.0			12.9	22.0			
Comprehension of Stories	R		7.9				8.8			
	NR		7.7				8.5			
Comprehension of Words (Chicago)	R	8.5	33.1			9.3	37.0			
	NR	8.7	32.6			9.8	34.4			
Total Comprehension	R	31.7	97.1			37.8	103.2			6 - 4.943 (s)[a]
	NR	32.7	88.6			40.0	94.6			
Comprehension of Sentences	R	4.0	18.6			4.0	20.2			6 - 8.323 (s)[b]
	NR	4.0	17.3			4.6	18.5			
Reading Comprehension	R	7.2	37.4	41.0	46.8	8.3	45.8	45.2	53.3	6 - 3.948 (s)[a]
	NR	7.4	36.6	40.3	46.0	9.2	40.1	42.1	48.2	9 - 3.881 (s)[a]
Total Reading (Metropolitan)					California				California	
	R	58.9	73.3	79.2	83.6	69.6	86.6	88.6	93.3	6 - 5.195 (s)[a]
	NR	54.7	71.1	78.0	80.7	68.8	76.3	82.2	85.0	9 - 4.101 (s)[a]
										12 - 4.138 (s)[a]
Reading Vocabulary		Recognition								
	R	18.0	36.2	38.6	36.3	19.8	40.8	43.5	39.6	6 - 6.234 (s)[a]
	NR	17.6	34.5	37.8	34.9	20.6	36.3	40.3	37.2	
Total Science	R		30.9	37.4	106.7		32.5	38.9	110.1	6 -12.193 (s)[b]
	NR		28.3	36.8	105.4		28.7	36.3	104.9	
Total Social Studies	R		51.5	56.5	117.7		56.8	59.7	123.1	6 - 7.304 (s)[b]
	NR		48.6	58.1	113.9		50.2	55.6	115.6	

[a] Significant at $P \leq .05$

[b] Significant at $P \leq .01$

*Variations in standardized test measures are a result of changes in tests as grade level increased.

TABLE 17 (Cont'd.)--A Comparison of Mean Scores on Selected Achievement Factors for those Boys and Girls ho Remained in Reorganized and Non-reorganized School Communities from Grades 1 through 12.

Achievement Item	Type of District	Boys				Girls				F Ratio and Significant R vs NR
		Grade 1	Grade 6	Grade 9	Grade 12	Grade 1	Grade 6	Grade 9	Grade 12	
Social Studies - History	R		22.7		and Civics 116.9		24.8		and Civics 123.1	
	NR		22.0		113.9		22.9		115.6	
Spelling	R		22.1	21.7	14.0		29.8	31.1	19.3	
	NR		22.4	21.1	14.2		19.6	30.4	19.7	
Total Achievement Metropolitan	R	96.5	284.2	317.6	California 511.5	109.8	334.5	364.4	561.4	6 - 5.748 (s)^{a}
	NR	96.4	274.1	318.8	503.5	112.9	299.9	342.9	534.9	
Literature Metropolitan	R		25.0	28.5			30.2	33.2		6 - 4.149 (s)^{a}
	NR		24.4	27.7			27.0	28.9		9 - 6.749 (s)^{b}
Social Studies Geography	R		28.8	28.6			32.0	30.6		6 -13.402 (s)^{b}
	NR		26.6	29.9			27.1	28.3		
Comprehension of Maps	R		4.2				4.7			
	NR		4.3				4.8			
Total Comprehension Maps, Stories, Directions, Paragraphs	R		40.1				45.1			6 - 4.839 (s)^{a}
	NR		38.3				41.7			
Total Achievement (Chicago)	R		50.6				58.1			
	NR		47.1				49.9			
Arithmetic Problems	R		17.7	18.7	Reasoning 38.4		20.8	22.0	Reasoning 41.2	6 - 5.850 (s)^{a}
	NR		16.7	20.0	37.8		17.5	19.9	37.0	9 - 3.994 (s)^{a}
Comprehension of Directions	R	3.0	6.5			3.5	7.0			6 - 7.396 (s)^{b}
	NR	3.0	5.7			3.6	6.5			
Arithmetic Fundamentals	R	Number Concept 39.9	32.3	36.1	55.2	Number Concept 44.4	37.4	42.6	60.7	6 - 9.955 (s)^{b}
	NR	40.6	30.0	36.3	55.2	44.3	32.4	38.1	59.2	

^{a}Significant at $P \geq .05$
^{b}Significant at $P \geq .01$

TABLE 17 (Cont'd.)--A Comparison of Mean Scores on Selected Achievement Factors for those Boys and Girls Who Remained in Reorganized and Non-reorganized School Communities from Grades 1 through 12.

Achievement Item	Type of District	Boys Grade 1	Boys Grade 6	Boys Grade 9	Boys Grade 12	Girls Grade 1	Girls Grade 6	Girls Grade 9	Girls Grade 12	F Ratio and Significant R vs NR
Rate of Reading	R		205.7				207.4			
	NR		186.9				215.0			
Word Picture	R	25.3				30.3				
	NR	23.7				32.1				
Word Meaning	R	15.3				19.3				
	NR	14.1				19.4				
Total Arithmetic	R		50.6	55.1	93.6		58.1	65.0	102.2	6 - 8.722 (s)[b]
	NR		47.1	56.3	93.1		49.9	58.0	96.1	9 - 3.927 (s)[a]
Total English	R			39.6				52.4		
	NR			41.6				50.1		
English Mechanics	R				95.4				112.4	
	NR				95.9				113.0	
Biological Science	R				64.0				67.3	12 - 4.164 (s)[a]
	NR				61.4				63.8	
Physical Science	R				43.9				42.9	
	NR				44.0				41.1	
Mental Age	R	87.5	147.3	184.1	229.7	88.1	155.0	194.7	240.3	12 - 7.778 (s)[b]
	NR	86.5	145.2	182.3	223.2	87.6	154.5	188.6	227.2	

[a] Significant at $P \geq .05$

[b] Significant at $P \geq .01$

TABLE 18--A Comparison of Mean Scores on Selected Social Factors for Those Boys and Girls Who Remained in Reorganized and Non-reorganized School Communities from Grades 1 through 12

Item	Type of District	Boys				Girls				F Ratio Reorganized vs Non-reorganized S = Significant NS = Non-significant
		Grade 1	Grade 6	Grade 9	Grade 12	Grade 1	Grade 6	Grade 9	Grade 12	
Social Skills	R		8.5	8.2	8.4		9.7	10.0	9.9	9 - 6.500 (s)[a]
	NR		9.0	9.4	8.9		9.9	10.0	10.1	
Social Standards	R		10.2	9.8	9.9		11.0	10.9	11.0	9 - 4.964 (s)[a]
	NR		11.6	10.4	10.0		10.9	11.1	10.9	
Total Personal Social	R		47.0	46.7	46.3		51.8	52.3	51.9	6 - 6.005 (s)[a] 9 - 6.633 (s)[a] 12 -10.330 (s)[b]
	NR		50.1	50.8	49.8		51.7	53.0	53.7	
Feeling of Belonging	R		10.1	10.5	10.2		10.9	11.0	10.8	9 - 5.968 (s)[a]
	NR		10.8	11.2	10.6		10.9	11.2	10.9	
Socio-Economic Status	R	70.5	75.3		77.9	73.0	77.2		79.0	
	NR	71.2	74.7		77.6	72.0	73.5		76.8	
Sense of Personal Worth	R		8.5	8.8	9.1		10.3	10.8	10.4	6 - 9.534 (s)[b] 9 - 7.804 (s)[b] 12 - 5.058 (s)[a]
	NR		9.7	10.0	9.7		10.0	10.7	10.8	
Community Relations	R		9.5	9.2	8.7		9.7	10.1	9.9	9 - 8.156 (s)[b]
	NR		10.1	9.9	9.4		10.1	10.1	9.9	

[a] Significant at P ≥ .05

[b] Significant at P ≥ .01

Socio-economic Contacts with Village Center

An additional hypothesis, H_{04}, was designed to test the theory that following reorganization of school districts in a community there would be greater social and economic contacts with the village center by those living in the farm service area. Following is an analysis of H_{04}--There are no differences between reorganized and non-reorganized school communities in the social and economic contacts of parents with the village centers.

Outcomes of the analysis of data related to H_{04} through grade six were such that it failed to be rejected. The analysis reported here dealt with 260 parent respondents from whom data identifying their contacts with the village center were available at both first and twelfth grade.

Table 19 shows the sample used in this study; the number of respondents from each community, and the total number of neighborhoods identified in each community in response to the questionnaire direction to: "Encircle the name of the neighborhood in which you live. If the neighborhood is not listed, please write it in."

TABLE 19--Distribution of Adult Respondents in Reorganized and Non-reorganized Communities and Number of Neighborhoods for Each Community when Children of Respondents were in First and Twelfth Grades

Community (R)	Respondents N.	Neighborhoods N.	Community (NR)	Respondents N.	Neighborhoods N.
Winneconne	33	10	Denmark	49	16
Blue River	7	4	Wauzeka	15	6
Kendall	19	8	Cazenovia	11	6
Port Wing	23	6	Gilman	30	11
East Troy	39	8	Waterford	39	11
Total:	121	36	Total:	139	50

Table 20 gives the overall proportion of responses from reorganized and non-reorganized school districts favoring the village center as the source of 11 selected social and economic services.

Examination of Table 20 reveals the total number of respondents from reorganized and non-reorganized school districts; the total responses registered regarding where services were obtained and the proportion of those responses favoring the village center. Over the 11-year period, a gain of approximately four percent was realized in favor of the reorganized community. The proportion of responses favoring the village center as the source of social and economic services decreased by approximately two percent from first to twelfth grade.

These differences were not significant and the null hypothesis H_{4a} failed to be rejected.

TABLE 20--A Comparison of Responses in Relation to Utilization of Eleven Selected Services in Reorganized and Non-reorganized School Districts and the Proportion of Responses Favoring the Village Center in First and Twelfth Grades

Total Respondents	Total Responses	Proportion using Village Center	
		First	Twelfth
Reorganized 121	1070	40 percent	44 percent
Non-Reorganized 139	1341	45 percent	43 percent

Comparison of reorganized and non-reorganized school districts in terms of respondents' utilization of selected services is shown in the data presentation and decision on significance illustrated in Table 21.

Data were analyzed by means of the Chi-square test to determine whether or not the changes in use of 11 selected services--Banking, Doctor, Newspaper, Movie, Dentist, Church, Clothing, Furniture, Feed, Gasoline, and Groceries--were different for reorganized and non-reorganized communities (H_{4b}).

TABLE 21--Comparison of Respondents in Reorganized and Non-reorganized School Districts Who Utilized Selected Village Center Services When Their Children Were in First and Twelfth Grades

Service	Reorganized					Non-reorganized					Signifi cance
	Total N	Grade 1 N	Grade 1 Percent	Grade 12 N	Grade 12 Percent	Total N	Grade 1 N	Grade 1 Percent	Grade 12 N	Grade 12 Percent	
Banking	101	66	65.3	68	67.3	133	90	67.7	83	62.4	NS
Doctor	104	42	40.4	48	46.2	140	54	38.6	61	43.6	NS
Newspaper	99	38	38.4	27	27.3	109	30	27.5	35	32.1	NS
Movie	88	53	60.2	42	47.7	109	80	73.4	62	56.9	NS
Dental	107	33	30.8	37	34.6	139	33	25.0	39	28.1	NS
Church	108	45	41.7	60	55.6	129	59	45.7	62	48.1	NS
Clothing	107	11	10.3	15	14.2	132	22	16.6	17	12.9	NS
Furniture	81	17	21.0	20	24.7	95	13	13.7	8	8.4	NS
Feed	52	20	38.5	25	48.1	84	51	60.7	47	56.0	NS
Gasoline	108	55	50.9	65	60.2	133	78	58.7	75	56.4	NS
Grocery	115	52	45.2	60	52.6	138	89	64.5	87	63.0	NS

Observations in Table 21 show great similarity; as a result, no statistically significant differences were found. H_{4b} failed to be rejected.

Data were then examined to determine the number of persons living outside the immediate neighborhood of the village center who contacted the village center for selected social and economic services. Analysis of these data is shown in Table 22.

TABLE 22--Comparison of the Number of Adult Respondents Residing in Neighborhoods Outside the Village Center in Reorganized and Non-reorganized School Districts Who Utilized Their Village Center for Selected Services When Their Children Were in First and Twelfth Grades

Service	Reorganized				Non-reorganized			
	1st		12th		1st		12th	
	N.	$\hat{p}$.	N.	$\hat{p}$.	N.	$\hat{p}$.	N.	$\hat{p}$.
Banking	31	40.26	35	45.45	55	62.50	51	57.95
Doctor	16	20.78	20	25.97	44	50.00	41	46.59
Newspaper	11	14.28	10	12.98	15	17.04	22	25.00
Movies	28	36.36	23	29.87	50	56.81	42	47.72
Dentist	13	16.88	19	24.67	32	36.36	32	36.66
Church	14	18.18	24	31.16	31	35.22	29	32.95
Clothing	4	5.19	7	9.09	11	12.50	7	7.95
Feed	15	19.48	20	25.97	38	43.18	35	39.77
Furniture	5	6.49	7	9.09	8	9.09	6	6.81
Gasoline	23	29.87	32	41.56	37	42.04	31	35.22
Grocery	17	22.08	29	37.66	51	57.95	54	61.36

The proportions outlined in Table 22 were based on a total of 77 respondents from the reorganized communities who did not reside in the immediate neighborhood of the village center; and upon the 88 respondents from the non-reorganized communities who did not reside in the immediate neighborhood of the village center. In the reorganized communities the number of respondents who patronized the village center for the selected services increased over the 11-year period for all services except movies and newspapers. In the non-reorganized communities, the respondents who patronized the village center for similar selected services only increased their use of grocery and newspaper services.

To determine the overall increase or decrease in the use of services of the village center, the total potential responses were considered for both reorganized and non-reorganized communities; and the proportions were then calculated for each district for the first and twelfth grades. The outcome of this analysis is illustrated by Table 23.

TABLE 23--Comparison of Overall Utilization of Village Center in Reorganized and Non-reorganized School Districts for Respondents Residing in Neighborhoods Other Than the Immediate Neighborhood of the Village Center

Reorganized				Non-reorganized			
Potential Responses = 847				Potential Responses = 968			
Actual Responses				Actual Responses			
1st		12th		1st		12th	
N.	$\hat{p}$.	N.	$\hat{p}$.	N.	$\hat{p}$.	N.	$\hat{p}$.
177	19.73	226	26.68	372	38.42	350	36.15

The increase for the reorganized district was approximately seven percent while non-reorganized realized a decrease of slightly more than two percent.

The H_{4c}--There are no differences between reorganized and non-reorganized school communities in the response of those residing in farm neighborhoods of the village center as to their social and economic contacts with the village center--was rejected on the basis of a two by two Chi-square test $P \leq .05$. Actual responses on village contacts increased in reorganized and decreased in non-reorganized communities between grades one and twelve (Table 23). In addition, it is noted in Table 23 that the actual contacts with the village center were higher for those in non-reorganized communities at both grade one and grade twelve.

Table 24 shows the amount of increase (+) or decrease (-) of contacts with the village center of each community in each of the five pairs. Analysis of these data was to test the H_{4d}--There are no differences in the extent of change of the contacts with the village center--on a total of 11 selected services in reorganized and non-reorganized communities.

TABLE 24--Comparison between Pairs of Communities as to the Percentage of Increase (+) or Decrease (-) of Contacts with the Village Center for 11 Services When Children Were in First and Twelfth Grades

Pair			Percent Increase (+) or Decrease (-)	
			R	NR
Winneconne	and	Denmark	+2.90	+2.41
Blue River	and	Wauzeka	+2.16	-1.83
Kendall	and	Cazenovia	+7.00	-7.27
Port Wing	and	Gilman	-1.86	-7.57
East Troy	and	Waterford	+6.60	-5.68

The differences that appear in Table 24 indicate a small increase in reorganized communities and a small decrease in non-reorganized communities. None were of sufficient magnitude to reject the hypothesis H_{4d}. In addition to tabled data, a slight difference in actual percentage of contact with the village center favored the reorganized district. The percentage of contact is higher in 25 cases in reorganized districts and in 22 cases in non-reorganized districts. These data were not sufficient to reject the hypothesis H_{4d}, but the consistency of the results lead to a failure to reject the hypothesis with some reservations.

Summary--Socio-economic Contacts

Hypothesis H_{o4} failed to be rejected on three of the four sub-hypotheses related to it. These were on 1) total contacts of all parents with the village center (H_{4a}), 2) contacts on each of 11 selected services (H_{4b}), and 3) the magnitude of the increases or decreases for reorganized and non-reorganized communities (H_{4d}). The one sub-hypothesis rejected (H_{4c}) was that dealing with farmer contacts only. In this instance, those living outside of the village center in reorganized districts increased their contacts, and those outside the village center in non-reorganized districts decreased their contacts. In spite of the difference in direction of contact, those in non-reorganized districts had a substantially greater number of contacts with the village center.

Appendix A

Department of Agriculture and Extension Education
Department of Education
University of Wisconsin, Madison

Parent's Questionnaire

Directions: Please check (✓) or answer all questions as correctly as you can. Feel free to write comments on the margins of the paper. Please return the questionnaire to the teacher of your twelfth grade child.

Your name____________________Your address____________________

Your twelfth grade child's name________________________________

I. Your house and equipment (place a check (✓) in front of the correct answer or write the correct answer).

1. What kind of a house is it? (a)___Brick (b)___Stucco (c)___Painted frame (d)___Unpainted frame (e)___Other (describe)____________________

2. _____ How many rooms do you use in your house? (Do not count bathroom, pantry, breakfast nook or basement).

3. _____ How many persons live regularly in your house?

4. What kind of lighting does your house have? (a)___Electric (b)___Gas, mantle or pressure (c)___Oil lamps (d)___Other (describe)____________________

5. _____Is drinking water piped into your house?

6. How is your washing done? (a)___Power machine (b)___Hand machine (c)___Without machine (d)___Washing sent out

7. How do you keep food cold? (a)___Mechanical refrigerator (b)___Ice box (c)___Deep freeze (d)___None

8. _____ Do you have a radio? (answer yes or no)

9. _____ Do you have a television set? (answer yes or no)

10. _____ Do you have an automobile? (do not count a truck or pick-up)

11. _____ Do you take a daily newspaper?

II. Your family

1. _____ What is the last grade in school completed by the wife?

2. _____ What is the last year in school completed by the husband?

3. _____ Does the wife attend at least 1/4 of the regular meetings of the church?

4. _____ Does the husband attend at least 1/4 of the regular meetings of the church?

________49-50

51. How much education do you want your twelfth grade child to have? (Check in proper blank)
1.___Grade School
2.___High School
3.___Trade School
4.___College
5.___

52. _____How many children do you have?

53. List the clubs and organizations of which the wife is a member.

__________________ __________________ __________________

__________________ __________________ __________________

54. If you belong to a church, check (✓) the denomination.
1.___Lutheran
2.___Catholic
3.___Presbyterian
4.___Methodist
5.___Protestant (name)
6.___Other Protestant
7.___Mixed (Husband and Wife)

55. Check (✓) the nationality background of both you and your (wife or husband).

	Husband	Wife			Husband	Wife	
1.	____	____	Swede or Norwegian	6.	____	____	Scotch
2.	____	____	Dane	7.	____	____	Irish
3.	____	____	German	8.	____	____	Bohemian
4.	____	____	Polish	9.	____	____	Other
5.	____	____	English	10.	____	____	Mixed

III. Your Farm (If you do not live or work on a farm, please leave Part III blank. If you live or work on a farm, please complete Part III).

56. What is your tenure status?
1.___owner
2.___renter
3.___laborer
4.___owner and renter
5.___other (explain)

57. How many acres of land are in your farm?
1.____ 1 - 40 acres
2.____ 41 - 80 acres
3.____ 81 - 120 acres
4.____121 - 160 acres
5.____161 - 200 acres
6.____201 - 240 acres
7.____241 - 280 acres
8.____281 - 320 acres
9.____over 321 acres
10.____

How many acres are under cultivation?__________________

58a. How many dairy cows do you have?
1.____None
2.____ 1 - 5 cows
3.____ 6 - 10 cows
4.____11 - 15 cows
5.____16 - 20 cows
6.____21 - 25 cows
7.____26 - 30 cows
8.____31 - 35 cows
9.____36 or more cows

58b. Has your family or your (wife's or husband's) family helped you in getting your farm through any of the following ways?
1. ________inheritance 3. ________No assistance
2. ________aid in purchase

58c. Do you think one of your children should take over your farm?
1. ________Yes - definitely 3. ________No
2. ________Yes - if interested

IV. Your occupation

59. ____________________What is your (husband's) main occupation?

V. Your Neighborhood

Please encircle the name of the neighborhood in which you live. If the neighborhood is not listed, please write it in.

Place a check (✓) before each of the following activities that you and your neighbors do together.

( ) 1. We help each other in cases of illness or death or other emergencies in the neighborhood.

( ) 2. We visit with other families and they visit with us.

( ) 3. We exchange tools and machinery.

( ) 4. We exchange work.

( ) 5. We borrow and lend money, food and other items.

( ) 6. We have picnics.

( ) 7. We go hunting and fishing.

( ) 8. We play cards, baseball, horseshoe, etc.

( ) 9. We tell each other our hopes and plans for the future.

( ) 10. We repeat jokes and stories about persons or groups of persons in the neighborhood.

( ) 11. We recall and talk about childhood and early experiences in the neighborhood. (These may be your personal experiences or stories of early settlers.)

VI. Services

For each of the services listed at the left in the following chart, please place a check (✓) in the column under the name of the town, neighborhood, or village where you go for most of that kind of service. Check only one column for each service. Omit any service that you do not use. If the town is not listed, write in the name of the town on the line following the service.

WINNECONNE COMMUNITY

SERVICES	Allensville	Appleton	Butte des Mort	Fremont	Larsen	Medina	Menasha	Mikesville	Neenah	Omro	Oshkosh	Poygan	Readfield	Skeleton Bridge	Winchester	Winneconne	Zittou	
Banking																		
Church																		
Clothes																		
Dentist																		
Doctor																		
Feeds																		
Furniture																		
Gasoline																		
Groceries																		
Hardware																		
High School																		
Lawyer																		
Library																		
Machinery																		
Movies																		
Newspaper																		
Tractor Fuel																		
Veterinary																		
Sell Dairy Products at																		
Sell Livestock at																		
Sell cash crops at																		
Have job at																		

Appendix B

Personal and Social Behavior Inventory*

Do Not Write or Mark on This Booklet

On the answer sheet fill in your school, your name, whether you are a boy or a girl, your birth date, and your grade in school.

You are to decide on each question in this booklet whether the answer is YES or NO and mark it as you are told. The following are two sample questions.

Samples

A. Do you have a dog at home?

B. Can you ride a bicycle?

Directions for marking answers

Draw a circle around the word YES or NO whichever shows your answer. Find the correct place to mark Sample A on your answer sheet. If you have a dog at home, draw a circle around the word YES in Sample A; if not, draw a circle around the word NO. Do it now.

Find the correct place to mark Sample B. If you ride a bicycle, draw a circle around the word YES; if not, draw a circle around the word NO. Do it now.

Now wait until your teacher tells you to begin. After she tells you, go right on from page to page until you have finished the booklet. Work as fast as you can without making mistakes.

Be sure the number you answer on the answer sheet is the same as the number of the item on the booklet.

BEGIN

---

*The majority of items in this inventory are used by permission of the California Test Bureau, Los Angeles, California.

11 Do your friends generally think that your ideas are good?

12 Do most of your friends and schoolmates think they are brighter than you?

13 Are your friends and the children in your school usually interested in the things you do?

14 Do you wish that your father (or mother) had a better job?

15 Do your schoolmates seem to think that you are not a good friend?

16 Do your friends and schoolmates often want to help you?

17 Are you sometimes cheated when you trade things?

18 Do your schoolmates and friends usually feel that they know more than you do?

19 Do your folks seem to think that you are doing well?

20 Can you do most of the things you try?

21 Do people often think that you cannot do things very well?

22 Do people often do nice things for you?

23 Do pets and animals make friends with you easily?

24 Are you proud of your school?

25 Do your schoolmates think you cannot do well in school?

26 Are you as well and strong as most boys and girls?

27 Are your cousins, aunts, uncles, or grandparents as nice as those of most of your friends?

28 Are the members of your family usually good to you?

29 Do you often think that nobody likes you?

30 Do you feel that most of your schoolmates are glad that you are in school?

31 Do you have just a few friends?

32 Do you often wish you had some other parents?

33 Are you sorry you live in the place you do?

34 Do your friends have better times at home than you do?

35 When people get sick or are in trouble, is it usually their own fault?

36 Is it all right to disobey teachers if you think they are not fair to you?

37 Should one return things to people who won't return things they borrow?

38 Is it all right to take things you need without paying for them, if you have no money?

39 Is it necessary to thank those who have helped you?

40 Do boys and girls need to obey their fathers or mothers even when their friends tell them not to?

41 If a person finds something, does he have a right to keep it or sell it?

42 Do boys and girls need to do what their teachers say is right?

43 Should boys and girls obey signs that tell them to stay off other peoples' land or yards?

44 Should boys and girls be nice to people they don't like?

45 Is it all right for boys and girls to cry or whine when their parents keep them from watching television?

46 Is it all right to cheat in a game when the umpire is not looking?

47 Do you let people know you are right no matter what they say?

48 Do you usually keep from showing your temper when you are angry?

49 Do you help new pupils to talk to other children?

50 Does it make you feel angry when you lose in games or parties?

51 Is it hard for you to talk to people as soon as you meet them?

52 Do you usually help other boys and girls to have a good time?

53 Do you usually act friendly to people you do not like?

54 Do you often change your plans in order to help people?

55 Do you usually forget the names of people you meet?

56 Do the boys and girls seem to think you are nice to them?

57 Do you try games at parties even if you haven't played them before?

58 Do you talk to new boys and girls at school?

59 Have you visited many of the interesting places near where you live?

60 Do you sometimes do things to make the place in which you live look nicer?

61 Do you think there are too few interesting places near your home?

62 Do you ever help clean up things near your home?

63 Do you take good care of your own pets or help with other people's pets?

64 Do you sometimes help other people?

65. Do you try to get your friends to obey the laws?

66 Do you help children keep away from places where they might get sick?

67 Would you like to have things look better around your home?

68 Is it all right to do what you please if the police are not around?

69 Does it make you glad to see the people around your house get along fine?

70 Do you dislike many of the people who live near your home?

71 Would you like to stay home from school a lot if it were right to do so?

Answer Sheet - Personal and Social Behavior Inventory

1 - 3 School:____

4 - 5 My name:_______________________________________

6 Check (✓) one: Boy_______ Girl_______

7 - 8 Birth Date: Year_______ Month_______ Day_______

9 - 10 Grade in school:_____________

SAMPLE A: YES NO

SAMPLE B: YES NO

11 YES NO
12 YES NO
13 YES NO
14 YES NO
15 YES NO
16 YES NO
17 YES NO
18 YES NO
19 YES NO
20 YES NO
21 YES NO
22 YES NO
23 YES NO
24 YES NO
25 YES NO
26 YES NO
27 YES NO
28 YES NO
29 YES NO
30 YES NO

31 YES NO
32 YES NO
33 YES NO
34 YES NO
35 YES NO
36 YES NO
37 YES NO
38 YES NO
39 YES NO
40 YES NO
41 YES NO
42 YES NO
43 YES NO
44 YES NO
45 YES NO
46 YES NO
47 YES NO
48 YES NO
49 YES NO
50 YES NO

51 YES NO
52 YES NO
53 YES NO
54 YES NO
55 YES NO
56 YES NO
57 YES NO
58 YES NO
59 YES NO
60 YES NO
61 YES NO
62 YES NO
63 YES NO
64 YES NO
65 YES NO
66 YES NO
67 YES NO
68 YES NO
69 YES NO
70 YES NO
71 YES NO